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AN INTRODUCTION TO **Money, Banking** AND **Financial Markets**

Semester - V & VI

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Money and Financial Markets [MFM]

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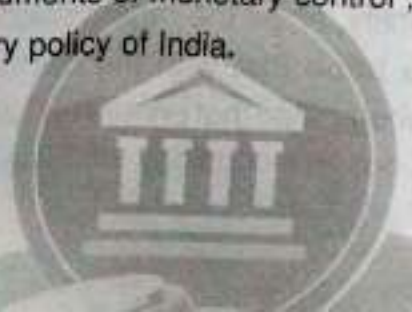
Total Credits : [5(Th)+1(Tu)]=6 ,

No. of Lecture hours : 75, No. of Tutorial contact hours : 15

[Semester-VI]

ECO-A-DSE-6-A(2)-TH

- 1. Introduction to money and Money and Banking** **5 lecture hours**
 - Concept, functions, measurement ; theories of money supply determination.
- 2. Financial Institutions, Markets, Instruments and Financial Innovations** **17 lecture hours**
 - Role of financial markets and institutions ; problem of asymmetric information – adverse selection and moral hazard ; financial crises.
 - Money and capital markets : organization, structure and reforms in India ; role of financial derivatives and other innovations.
 - Why banks are special Institutions ? How banks act as a leveraging mechanism ?
- 3. Financial Markets and Interest Rates Behaviour** **18 lecture hours**
 - Determination ; sources of interest rate differentials ;
 - Theories of term structure of interest rates ; interest rates in India.
- 4. Banking System** **20 lecture hours**
 - Balance sheet and portfolio management ;
 - Multiple Deposit Creation,
 - Determinants of the Money Supply.
 - Indian banking system — Changing role and structure — banking sector reforms
- 5. Central Banking and Monetary Policy** **15 lecture hours**
 - Functions, balance sheet ; goals, targets, indicators and instruments of monetary control ;
 - Monetary management in an open economy; current monetary policy of India.



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Money Supply and Banking System with Reference to India

1.1. Introduction

All modern economic systems make use of money. Prices are quoted in terms of monetary units. Incomes are paid and received in the form of money. For this reason, the decision problems of the economic units (i.e., consumers, firms, the Government, etc.) have a monetary dimension. For instance, the principal aim of a business firm is to earn maximum profits. These profits are expressed in monetary terms. Hence, the real quantity of profits would depend on the value of money. For these reasons, the discussion of money is important in Economics. In this chapter, we shall also discuss the banking system of any country. The banking system plays an important role in determining the supply of money in an economy.

1.1.1. Basic concept : Definition of money

In any country the article, which acts as the medium of exchange, the measure of value, the standard to deferred payment and as the store of value, is defined as 'money'.

In this connection, we can refer to the definition of money given by Walker. According to him, "Money is what money does". But this is considered to be a vague definition of money. In fact, money perform various functions, but this definition does not specify any significant function of money.

There are also other definitions of money given by economists like Robertson, Cole, and Kent. These are stated below :

- Definition given by Robertson :** "Anything which is widely accepted in payments for goods or in discharge of other kinds of business obligations", can be termed as money.
- Definition given by G. D. H. Cole :** "Money is anything which is habitually and widely used as a means of payment and is generally accepted in the settlement of debts".
- Definition given by Kent :** "Money is anything which is commonly used and generally accepted as a medium of exchange or as a standard of value".

However, these are considered to be the narrow definitions of money because each of these definitions considered only one or two functions of money. But an appropriate definition of money should take into account not only the important functions of money, but also its basic feature, viz., the general acceptability of money. The definition of money given by Crowther seems to be suitable in this respect. According to Crowther, "anything that is generally acceptable as a means of exchange, and at the same time acts as a measure and store of value", can be considered as money.

● **Legal definition :** When any medium of exchange is generally acceptable to the common people and is enforced by law, then that medium of exchange is considered as money or legal tender.

Thus, when we review the definitions of money it becomes clear that in common parlance, the term 'money' may often signify only rupee notes and coins with the public. However, in our subsequent discussion we shall show that these are only a part of the aggregate money supply in an economy. Sometimes the savings account balances or the demand deposits (the money which can be withdrawn on demand from the commercial banks) are considered as money. However, the savings account



balance cannot be considered as money in the true sense of the term because that balance has to be converted first into a legal tender or a common medium of exchange (say, rupee notes) and then it can be treated as money. It is important to note that in some cases the seller may not accept the cheque payment (which can be used by a buyer to settle the claims of the seller who can use it to withdraw money from the buyer's savings bank account with a commercial bank). Following the same argument, some of the physical assets such as gold ornaments or a landed property cannot be considered as money since these assets cannot be used directly for settling the claims of any seller. These assets are to be converted into cash at first and then the currency notes can be used to settle down the claims. In this context, we must have the idea of 'liquidity' of an asset. The ease or low cost with which any asset can be converted into cash is considered as the liquidity of that asset. Thus, gold ornaments might be more liquid than a landed property.

Further, the ATM card (the debit or credit card) issued by a bank though helps a person to settle the claims of a seller, these ATM cards cannot also be considered as money because one cannot directly purchase any commodity by handing over such a card to the seller.

Sometimes, the terminologies 'wealth' and 'money' are used synonymously but wealth is not money. A person's wealth may constitute of huge landed property and bank balances but we have already shown that these assets cannot be truly considered as money.

1.1.2. Stages in the evolution of money & types of money

If we review the history of the evolution of money, we find that money had appeared in different forms before taking its final form as we see it today. Here, we can point out the principal stages in this evolution of money.

- (a) **Commodity money** : When various commodities (such as, cowrie shells, hides and leather, foodgrains, animals, etc.) are used as money, we call it commodity money. It is the most primitive form of money. However, various problems like improper standardisation, indivisibility, difficulty in storing, etc., made this form of money as an unsuitable medium of exchange.

A type of commodity money in which the commodity itself circulates as money is called as full-bodied money. For instance, silver or gold coins can be considered as full-bodied money. The monetary value of full-bodied money becomes exactly equal to its nonmonetary value. Thus, if the price of gold is \$1 per ounce then a \$1 gold coin contained one ounce of gold. It is interesting to note that during World War II, prisoners of war used cigarettes as the medium of exchange to get chocolate candy, cookies, and other items. Thus, in this case, cigarettes can be considered as full-bodied commodity money. However, the convertible paper currency (which could be converted into a specific quantity of gold or silver) can be considered as representative full-bodied money. The advantage of representative full-bodied money is that the commodity itself does not have to circulate; only the paper claim to the commodity has to circulate as the medium of exchange.

- (b) **Metallistic money** : With the gradual progress of society and civilisation, different sections of people agreed to consider some precious metals (like gold and silver) as common medium of exchange. Hence, we observe the emergence of metallistic money in the form of gold and silver. The first gold coin was introduced in India by the King Kanishka of Kushan dynasty during First Century A.D.

- (c) **Paper money or standard money** : With the gradual expansion of trade and commerce and greater demand for money as a common medium of exchange, metallistic money was replaced by paper money or standard money. The Central Bank of a country assumes supreme authority in issuing such paper money (or paper notes) of definite denominations and value. The Government authority promises to pay the bearer of those paper notes a definite sum of value as noted or printed on those paper notes. Hence, they were called promissory notes. The extrinsic value of



the paper note is more than its intrinsic value (e.g., the face value of a 100 rupee note is equivalent to goods worth ₹ 100 but its value as a piece of paper is almost nil). So, they are also called token money.

- **Legal tender or Fiat money** : When general acceptability of any medium of exchange is enforced by law, that medium of exchange is called the legal tender or Fiat money. For example, the rupee notes and coins are legal tenders. No one can refuse to accept this money.

The rupee notes of higher denominations (say, 100/500/1,000 rupee notes) are considered as unlimited legal tenders because they can be used for settling claims relating to high-value transactions. However, the coins of smaller denominations are considered as limited legal tenders (say, 1/2/5 rupee coins) because they are acceptable only for meeting financial transactions of lower value (say, meeting your short-distance bus/auto fare).

Fiat money has no value as a commodity and does not represent a claim to any physical commodity. It can take the form of unbacked paper money, i.e. it is not backed by gold or silver held in a depository (say, with the Central Bank of the country).

- (d) **Deposit or credit or Bank money** : At the final stage of evolution of money, the demand deposits with commercial banks are also considered as Bank money. Any deposit with a commercial bank which can be withdrawn on demand, is called demand deposit (say, withdrawal from savings deposit by issuing cheques). Thus, cheques drawn on the demand deposits of commercial banks can be used as a medium of exchange. This is also possible when any commercial bank gives credit or loan to any individual. Hence, demand deposits with the commercial banks of any country constitute the deposit money or credit money or Bank money. At present the 'credit cards' issued by different commercial banks also fall in this category. These cards are often called as plastic money. It is important to note that someone can refuse to accept such Bank money in the form of cheques or credit cards.

1.1.3. Functions of money

What are the functions of money? Kinley has classified the functions of money into three groups: (i) primary functions, (ii) secondary functions, and (iii) contingent functions.

- (i) **Primary functions** : The most essential functions that money should perform in every economy, are regarded as primary functions of money.

- (a) **Medium of exchange** : Money acts as the medium of exchange. The major function of money is to facilitate the process of exchange by removing the defects of the barter system.

- (b) **Measure of value** : Money is the measure of value. The price of any one good has to be expressed in terms of another. If, under the barter system, it is possible to get 2 kilograms of potatoes for a piece of cloth, the price of cloth in terms of potatoes will be 2, i.e., obtaining 1 unit (or one piece) of cloth requires giving up 2 units (here, 2 kilograms) of potatoes.

The price of cloth can be expressed in terms of money just as it can be expressed in terms of potatoes. When we say that the price of a piece of cloth is ₹ 15, we mean that in order to obtain one piece of cloth we have to give up 15 units of money. This is the price of cloth in terms of money. The good, in terms of which the prices of all other goods are expressed, is called the measure of value or the numeraire. In modern economies it is money which acts as the numeraire, i.e., prices of all goods are expressed in terms of money.

- (ii) **Secondary functions** : The functions of money which are derived from its primary functions, are regarded as its secondary functions.

- (a) **Standard of deferred payment** : Credit is given in terms of money. If a person needs 10 kilograms of rice but does not have the required amount of money with him at the time, he borrows this amount. If the price of rice is ₹ 5 per kilogram, he has to borrow ₹ 50. He has to



return ₹ 50 (plus interest) to the lender at the end of the agreed period. Notice that the person needed rice. But he borrowed money. He did not borrow rice. The interest also is calculated in terms of money. The additional amount that has to be returned (i.e., the amount per ₹ 100 per year) is called the *money rate of interest* or simply, the *rate of interest*. Thus, the calculation of interest on credit is done through money. Credit is needed when we cannot pay now for a commodity (or a service) that we wish to consume now. For this reason, money is called the *standard of deferred payment*.

(b) **Store of value** : Wealth is usually kept in the form of money because money is the most liquid form of wealth. Since savings is usually done with a view to use the savings for purchasing some commodities or services, it is as if the values of commodities are being stored. Hence, money is called the *store of value*.

It is often said that, 'Money is a matter of functions four : A medium, a measure, a standard, and a store'.

(c) **Transfer of value** : Money is also a means for transferring a given value from one individual to another. If any person purchases a commodity (say, wheat from the shop-keeper and pays ₹ 10 per kilogram of wheat purchased) then the value of that commodity can easily be transferred from the buyer to the seller through a payment in terms of money.

It is important to note that a good monetary unit should possess all these qualities, i.e., (1) it should be acceptable to all and act as a medium of exchange, (2) it should be easily used to measure the values of different quantities of goods and services, (3) it should be effectively used as a standard of deferred payment, and (4) it should also be used easily as a store of value.

(3) **Contingent functions** : The functions performed by money in assisting various economic agents (like, consumers and producers) in making economic decisions, are called contingent functions of money. These are noted below :

(a) **Assisting production decisions** : The principal objective of any producer is to maximise his sales revenue or profit. So, the producer or the firm wants to employ such an amount of factors of production (say, labour, capital and other materials) which would help in achieving those goals. While employing any factor, the firm has to make factor payments (or contractual payments) i.e., the firm has to pay wages to the workers, interest to the owners of capital, etc. All such factor payments are made in terms of money. Hence, money-prices of those factors help the producer in taking important production decisions.

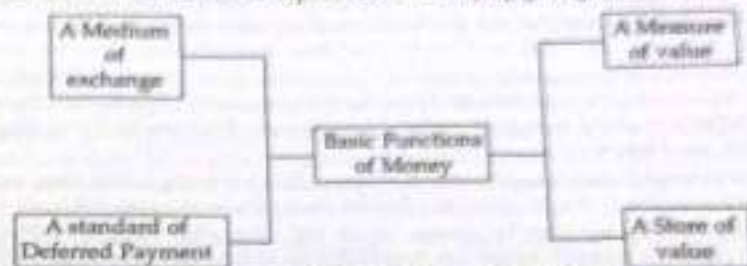
(b) **Assisting consumption decisions and maximising utility** : The principal objective of any consumer is to maximise his or her utility through the consumption of various goods. But this consumption depends on the money income of the consumer as well as the money-prices of the commodities to be consumed. Thus, the consumer has to pay a price for the commodity purchased for his/her own consumption. So, the money income of the consumer and the money-prices of these commodities also influence the consumption decisions of different individuals.

(c) **Assisting distribution of national income** : The owners of various factors of production sell their factors at market prices. Thus, the owners of labour power earn money wages, owners of capital earn interest, owners of land earn rent and the owners of 'organising power' earn profits. All these factor incomes, taken together, constitute national income of a country. Thus, the distribution of national income among the owners of different factors are also determined by the money prices of those factors.

(d) **Assisting the operation of a credit system** : With the gradual expansion of trade and commerce, the credit system has become very important. However, money forms the basis of



such credit operations performed by the business and financial institutions in an economy. For instance, if there is insufficient deposit of money with commercial banks, it becomes difficult for those banks to expand credit money by giving loans to several individuals.



1.2. The Concept of Demand for and Supply of Money

The economic progress of a country depends on the level of consumption, production and distribution of income among different factors of production in the economy. Prof. Paul Elmsig believes that money performs a dynamic function in an economy through influencing the level of consumption, production and the distribution of income. Consumption of various goods and services in an exchange economy (where money is used as a medium of exchange) is determined by the average money income of the people. This money income determines the purchasing power of a consumer. Again, given the money income of a consumer, the money-prices of consumption goods determine the level of consumption of those goods in an economy.

Again, the level of production in an economy is also influenced by the money flow and money-prices of different factors of production. Hence, money is demanded both by the consumers and producers for purchasing consumer goods and producer goods respectively.

Money is also considered as the store of value. Hence, people prefer to save a portion of their present money income to overcome the uncertainties of future income. So, the demand for money also arises from the precautionary motive of the people.

However, J. M. Keynes believed that money is also demanded for some speculative purposes. People often purchase bonds at lower prices with the expectation that they can sell them at higher prices. In our subsequent sections, we shall illustrate this view with examples.

The supply of money, on the other hand, is determined by the monetary authority (or the Central Bank) of the country. The coins and paper notes are two important forms of money in any country. The Central Bank of a country has the supreme authority in issuing such paper notes of definite denominations and value. The government authority promises to pay the bearer of these paper notes a definite sum of value as noted or printed on those paper notes. Hence, these paper notes (or paper currencies) are called as *promissory notes*. The extrinsic value of these paper notes remains more than their intrinsic value (e.g., the face value of a 500 rupee note is equivalent to goods worth ₹ 500 but its value as a piece of paper is almost nil.)

Again, the demand deposits with the commercial banks are also considered to be an important constituent of the money supply in an economy. Any deposit with a commercial bank which can be withdrawn on demand, is called *demand deposit* (say, withdrawal from savings deposit by drawing cheques). Thus, cheques drawn on the savings deposits with the commercial banks can be used as a medium of exchange.



1.3. Definition of Money Supply in Indian Context

We have already shown that 'money' in any modern economy constitutes currency notes and coins issued by the monetary authority of the country. The supply of money in any country refers to the stock of money held by the public at any particular point of time. So, money supply is a stock concept.

The total amount of money in an economy consists of various components: currency, demand deposits of commercial banks, time deposits of commercial banks and other types of deposits in the economy. We get different definitions of the supply of money depending on which particular components are included and which are left out.

In India, coins and one-rupee notes are issued by the Government of India, while other paper notes are issued by the Reserve Bank of India (viz., the Central Bank of our country). All notes and coins together constitute currency. However, by money we do not mean cash only. Demand deposits in commercial banks, i.e., those deposits which can be withdrawn at any time (consisting of both savings account and current account deposits) should also be counted as money, especially since people can purchase goods and services in the market by drawing cheques on such deposits. Currency plus demand deposits plus certain other deposits (e.g., those held by commercial banks in the central bank) is called M_1 in India. This is one measure of money supply.

Currency plus demand deposits plus (net) time deposits (i.e., fixed deposits) of commercial banks constitute another measure of money supply. Some economists believe that since, in certain cases, loans can be taken against fixed deposits and used for purchasing goods and services in the market, these deposits should also be included in the supply of money. In a similar way, if we include deposits in post offices, we get another measure of money supply. If we include deposits in the various non-banking financial institutions, we get yet another measure of money supply. However, currency plus demand deposits is the most widely accepted measure of money supply.

1.3.1. Other Measures of Money Supply (M_1 , M_2 , M_3 and M_4)

Some of the measures of the supply of money are mentioned below:

M_1 = Rupee notes and coins with the public (C) + demand deposits with the commercial banks (DD) + other deposits with the Reserve Bank (OD).

Here, C = Rupee notes and coins held by the public at a particular point of time (say, as on 30th June, 2010);

DD = The amount of demand deposits (viz., the deposits in savings account and current account) with the commercial banks; and

OD = Other deposits with the RBI. These other deposits include:

- Demand deposits of some foreign central banks and foreign governments with the Central Bank [Say, the Reserve Bank of India (RBI)].
- Demand deposits of some Development financial institutions (say, Industrial Development Bank of India, Industrial Finance Corporation of India, etc.) with the RBI; and
- Demand deposits of some international financial institutions (e.g., International Monetary Fund (IMF), World Bank, Asian Development Bank etc.) with the RBI.

Here, OD does not, however, include (i) the statutory deposits of the commercial banks with the RBI and (ii) the government deposits with the RBI.

It is also important to note that while measuring the M_1 , the net demand deposits (or the net demand liabilities) with the commercial banks are to be considered.

Here, net demand deposits = gross demand deposits (-) inter-bank claims.

Since the inter-bank claims do not enter into the demand deposits of the people with the commercial banks, so this portion is subtracted from the gross demand deposits.



■ Other measures of money supply:

(i) $M_2 = M_1 + \text{Postal savings bank deposits.}$

In this measurement, the deposits of the people with postal savings banks are also included in the money supply. This is because the people can withdraw money from their postal savings bank deposits on demand. The short-term time deposits (or fixed deposits) of smaller denominations are also included in M_2 .

(ii) $M_3 = M_1 + (\text{Net}) \text{ Time deposits with the commercial banks.}$

In this measure, which is supposed to be much broader than M_1 -measure of money supply, the net time deposits or term deposits (or long-term deposits) of the public with the commercial banks are also treated as a constituent of the money supply in an economy. This is because the people can take loan from the commercial banks against such term deposits.

Here, the time deposits are considered in the 'net' sense because only the term deposits of the people with the commercial banks are included in the money supply. The inter-bank term deposits are deducted from the gross term deposits to determine the net term deposits with the commercial banks.

Net time deposits = Gross time deposits (-) inter-bank time deposits with the commercial banks.

(iii) $M_4 = M_3 + \text{Total deposits with the postal savings organisations (excluding National Savings Certificates).}$

In this measure of money supply, both demand and time deposits of the public (except National Savings Certificates) with the postal savings organisations are included in the money supply in addition to M_3 .

In India, M_1 and M_2 are considered as **Narrow Money**, while M_3 and M_4 are treated as **Broad Money**. Since M_1 and M_2 include lesser constituents of money supply, they are considered as **Narrow Money**. On the other hand, M_3 and M_4 include greater number of the constituents of money supply, and hence, they are considered as **Broad Money**. Generally, M_3 is used to measure the 'Aggregate supply of monetary resources' of a country.

However, from the view point of liquidity of an asset, M_1 is supposed to be most liquid and M_4 is supposed to be least liquid. The ease with which any asset can be converted into cash, is considered as the liquidity of that asset. Thus, cash is the most liquid asset.

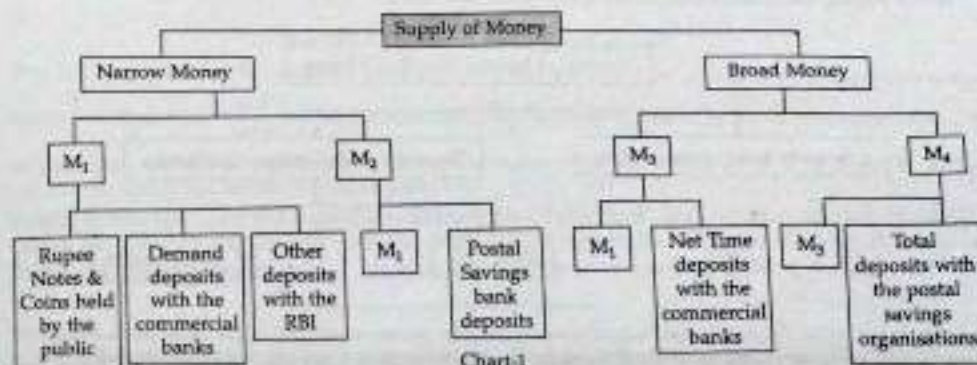


Chart-1

The Reserve Bank of India also indicates M_0 as the 'reserve money' and it is defined as follows:
 $M_0 = \text{Reserve Money} = \text{Currency in circulation} + \text{Bankers' deposits with the RBI} + \text{'Other' deposits with the RBI}$

$= \text{Net RBI credit to the Government} + \text{RBI credit to the commercial sector} + \text{RBI's claims on banks} + \text{RBI's net foreign assets} + \text{Government's currency liabilities to the public} + \text{RBI's net non-monetary liabilities}$

Here, 'Bankers' deposits with the Reserve Bank' represent balances maintained by banks in the current account with the Reserve Bank mainly for maintaining Cash Reserve Ratio (CRR) and as working funds for clearing adjustments. 'Other' Deposits with the Reserve Bank, for the purpose of monetary compilation, include deposits from foreign central banks, multilateral institutions, financial institutions, and sundry deposits net of International Monetary Fund (IMF) Account.

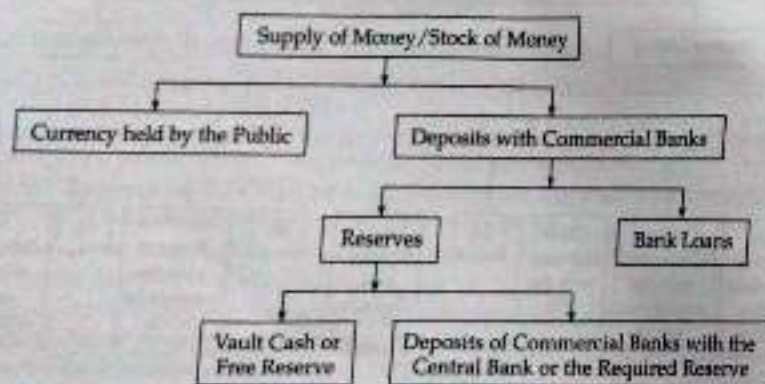
On the other hand, 'Net Reserve Bank of India (RBI) credit to Government' includes the Reserve Bank's credit to Central as well as State Governments. It includes ways and means advances and overdrafts to the Governments (to overcome the short-term budgetary deficits), the Reserve Bank's holdings of Government securities, and the Reserve Bank's holdings of rupee coins less deposits at the concerned Government with the Reserve Bank. The Reserve Bank's claims on banks include loans to the banks including National Bank for Agriculture and Rural development (NABARD). Similarly, the Reserve Bank's credit to the commercial sector represents investments in bonds/shares of financial institutions, loans to them and holdings of internal bills purchased and discounted. 'Government's currency liabilities to the public' comprise rupee coins and small coins. The Reserve Bank's net foreign assets are its holdings of foreign currency assets and gold.

1.3.2. Measurement of money supply & its determinants

By definition Money Supply, M = chequeable deposit held by the public in the commercial bank (D) + currency in the hands of public (C)

Therefore, $M = D + C$

This implies that the stock of money supply depends partly on the desire of the common public to hold money as well as upon the demand deposits with the commercial banks, and it also depends upon the Central Bank since the commercial banks have to maintain a statutory reserve with the Central Bank of the country. Thus, the money supply depends on the interactions between the activities of the public, the commercial banks and the Central Bank.



We define currency-deposit ratio as $\beta = C/D$. This ratio summarises the behaviour of the public in the process of determination of money supply. The reserve-deposit ratio can be denoted by $\alpha = R/D$ and it is the variable that summarises the role of banks in the process of determination of money supply. Central Bank's role in the process of determination of the stock of money is summarised by the variable, viz. high powered money H .

Given H , C and R , we can show how the stock of money is determined. Demand for high powered money and supply of the high powered interact to determine the stock of money. Let H^d be the demand function for high powered money and it originates from two sources: (i) in the form of public desire to maintain a part of their money holding in the form of currency and (ii) the functioning of commercial banks in respect of maintain their reserves.

Therefore,

$$H^d = C + R$$

$$= (\alpha + \beta) \times D \quad \because \alpha = \frac{R}{D} \text{ \& } \beta = \frac{C}{D}$$

By definition, the stock of money:

$$M = C + D$$

$$= \beta D + D$$

$$= (1 + \beta) \times D$$

$$D = (1 / (1 + \beta)) \times M$$

Substituting this value in the demand for high powered money we get:

$$H^d = \left\{ \frac{\alpha + \beta}{1 + \beta} \right\} \cdot M$$

The supply of high powered money is controlled by the Central Bank and it is given as a policy variable. Let $H^s = \bar{H}$ where $\bar{H}$ is a decision or policy variable as determined by the policy of the Central Bank. In equilibrium $H^d = H^s$

$$\text{or, } \left\{ \frac{\alpha + \beta}{1 + \beta} \right\} \times M = \bar{H}$$

$$\therefore M = (1 + \beta) / (\alpha + \beta) \cdot \bar{H}$$

This is the equation for the stock of money supply. Clearly the level of money supply depends on the money multiplier ($m = \frac{1 + \beta}{\alpha + \beta}$) which, in turn, depends on C and R . The supply of money also depends

on the supply of high powered money, H . So, the stocks of money are function of α , β and $\bar{H}$. Now, we can also show the factors which influence α :

Firstly, α depends upon the uncertainty surrounding the inflows and outflows of cash of a bank. Larger the value of inflows and outflows, higher is the uncertainty about reserve-deposit ratio of banks and higher is the value of α . Now, denoting the level of uncertainty by σ , we have:

$$(\partial \alpha / \partial \sigma) > 0$$

Secondly, α depends upon the cost of borrowing (denoted by r_D) in the events of banks running short of cash. Here, r_D signifies the bank rate or the discount rate at which the securities submitted by the commercial banks to the Central bank are discounted while taking loans from the Central Bank (or simply speaking the rate of interest charged by the Central Bank on the money borrowed by the commercial banks.) As r_D rises commercial banks maintain a higher value of reserves for a given

volume of deposits by lowering the volume of bank loans. Thus, $\alpha = R/D$ increases as r_D increases and

$$(\partial \alpha / \partial r_D) > 0$$

Thirdly, it also depends upon the cost of maintaining reserve in the form of forgone interest income on the reserve which we consider to be the market rate of interest r . As r rises, commercial banks raise the volume of bank loans for any given volume of bank deposits by lowering the volume of reserves. R . Thus, $\alpha = R/D$ declines as r increases and we get

$$(\partial \alpha / \partial r) < 0$$

Fourthly, it depends on the required reserve-deposit ratio, say, denoted by r_R . As the required deposit ratio rises, the actual reserve-deposit ratio (α) also rises and we get

$$(\partial \alpha / \partial r_R) > 0$$

So, money supply function may be written as,

$$M = [(1 + \beta) / (\alpha + \beta)] \cdot \bar{H} \\ = f[\alpha, \beta, r, r_D, r_R, \sigma] \cdot \bar{H}$$

This expression actually shows the determinants of the money supply. These determinants would be discussed further in subsequent section.

1.3.3. Balance sheet of the Reserve Bank of India (RBI) and the accounting interpretation of High-Powered Money

The Balance Sheet of RBI is presented below :

Table-1.1
Balance sheet of RBI

Liabilities	Assets
1. Currency [(i) + (ii)] (i) Notes in circulation. (ii) Government's currency liabilities to the public comprising rupee coins and small coins.	1. Domestic credit [(i) + (ii) + (iii)] (i) Credit to government. (ii) Credit to commercial sector. (iii) Claims on banks.
2. Other deposits [(a) + (b) + (c) + (d)] (a) Deposits of quasi-government and other financial institutions (b) Balances in the accounts of foreign central banks and governments (c) Accounts of international agencies such as the IMF, etc. (d) Provident, gratuity and guarantee fund of the RBI staff. (e) Profit of the RBI held temporarily under the deposits pending transfer to the central government.	2. Net foreign exchange assets of the RBI.
3. Bankers' deposits	3. Capital account



• Concept of High-Powered Money :

The High-powered money refers to the total liability of the monetary authority (say, the RBI) of the country. It consists of :

- Currency held by the public ;
- Cash reserve with the commercial banks ;
- Required reserve of the commercial banks to be maintained with the RBI ; and
- Other deposits with the RBI.

This High-powered money is also called as the **Monetary Base** or the **Reserve Money** of the country.

[The term 'High powered' implies that an increase in this base money by ₹ 1 leads to an increase in more than ₹ 1 in total money supply. This process will be discussed in subsequent sections.]

We know that every commercial bank has to keep certain proportion of its total deposits with the Central Bank. This is called **required reserve**. For example, the commercial banks may have to keep 10 per cent of their total deposits as cash reserve with the Central Bank (which is known as statutory cash reserve ratio). The rest 90 per cent can be used by the commercial banks for credit creation as well as for meeting the regular day-to-day demands of their depositors. This is called as **free reserve** (or the vault cash).

Both these reserves, viz, cash with commercial banks (free reserve) and statutory cash reserves to be maintained by the commercial banks with the Central Bank (required reserve) are considered as assets of the commercial banks but liabilities to the Central Bank. These are liabilities to the Central Bank because it promises to pay the bearer of these legal tender (or currency notes) an exchange value equivalent to the sum printed on those currency notes.

This reserve money plays an important role for the creation of credit money by the banking system or by the commercial banks as a whole in an economy. Given the required reserve, if the commercial banks can borrow funds at lower costs [i.e., at lower bank rate, viz., the discount rate at which the Central Bank discounts the securities produced by the commercial banks while lending to commercial banks] from the Central Bank, their free reserves will rise. Hence, the commercial banks then can give more loans to their clients and more credit money can be created. Thus, reserve money increases when the Central Bank provides more credit or lends to the commercial banks.

1.3.4. The credit multiplier theory and balance sheet of commercial banks

There was a time when commercial banks issued their own paper notes. These were called **bank notes**. These notes used to circulate in the market as money. On the notes was written a promise that the bearer can get the specified amount of money from the bank at any time. Naturally the notes issued by the banks on which people had greater reliance were more acceptable in the market.

Now-a-days, however, the right to issue notes by the commercial banks has been withheld. No commercial bank can now issue notes. This right is now enjoyed exclusively by the central bank of the country. In India, one-rupee notes are issued by the Government itself. Other notes are issued by the Reserve Bank of India.

Even now, however, banks do create money. Money is created by giving credit facilities to their clients (so, it is called credit money). Cheques drawn on bank deposit are used as money in the market. When a businessman approaches a bank for a loan, the bank creates an imaginary deposit in his name. He can draw cheques on this deposit. This is how banks create money now-a-days. Thus, the process of multiplication of bank deposits through extension of loans and advances refers to the credit creation function of a commercial bank.

Banks learn from experience that it is not necessary to hold in the bank all the money that people deposit. Because, all depositors do not wish to withdraw all their deposits at the same time.



Moreover, everyday there is some flow of new deposits into the bank just as there are some withdrawals. Hence, it suffices to keep only a small fraction of the total deposits in the bank. The rest can be lent out to businessmen. Now-a-days, in most countries, the central bank fixes the fraction that is to be held in the form of cash by any commercial bank with the Central Bank. This is called the *cash reserve ratio*.

When commercial banks give loans to any individual or institution, then an account is opened by the bank against the name of that individual or institution. This is known as *derivative deposit*. So, loans create derivative deposits.

Let us assume that the commercial bank gives loans against some collateral securities or by keeping some assets (at least of equal value of the loan amount) as mortgage. Let us also assume that the cash reserve ratio (CRR) is 20 per cent.

Now, if any person or institution, out of its own initiative, deposits some amount of money with the commercial bank, then a *primary deposit* is created. Now, out of this primary deposit, the commercial bank keeps aside 20 per cent and the remaining 80 per cent can be used for giving loans. Hence, we can say that *deposits create loans*.

Let us assume that the primary deposit of 'X' bank has increased by ₹ 100. As, CRR = 20%, so the bank can give loan to the extent of ₹ 80. So, a derivative deposit of ₹ 80 will be created. The balance sheet of 'X' bank will be as follows:

Balance Sheet of X bank

Liabilities	₹	Assets	₹
Primary deposit	100	Cash in hand	100
Derivative deposit	80	Mortgaged assets	80
	180		180

When the receiver of this loan withdraws the whole amount from the X bank and makes payment to somebody else (who has an account with, say, 'Y' bank) then ₹ 80 may appear as *primary deposit* in 'Y' bank. In that case, the balance sheets of X-bank and Y-bank will be as follows:

Balance Sheet of X bank

Liabilities	₹	Assets	₹
Primary deposit	100	Cash in hand	20
Derivative deposit	—	Mortgaged assets	80
	100		100

Balance Sheet of Y bank

Liabilities	₹	Assets	₹
Primary deposit	80	Cash in hand	80
Derivative deposit	64	Mortgaged assets	64
	144		144

(Because 20% of ₹ 80, i.e., ₹ 16 is kept aside by the 'Y' bank and the balance of 80% of ₹ 80, i.e., ₹ 64 is used for giving loans.)

In this way, the total deposit created by the banking system as a whole will be

$$100 + 80 + 64 + \dots$$

$$\text{or, } 100 + 100 \left(\frac{4}{5}\right) + 100 \left(\frac{4}{5}\right)^2 + \dots$$



It is a G.P. series and the sum of this series will give us the estimate of total deposits created by the banking system. The sum of this series will be

$$S = \frac{100 \left[1 - \left(\frac{4}{5}\right)^n \right]}{1 - \frac{4}{5}}$$

Now, as $n \rightarrow \infty$ (infinity)

Then, $\left(\frac{4}{5}\right)^n \rightarrow 0$ (Zero) [i.e., as 'n' tends to infinity, $\left(\frac{4}{5}\right)^n$ tends to zero].

$$\therefore S = \frac{100}{1 - \frac{4}{5}} = \frac{100}{\frac{1}{5}} = 100 \times 5 = ₹ 500$$

Thus, the banking system as a whole will be able to create total deposits to the extent of ₹ 500 which is five (5) times more than the initial increase in the primary deposit (i.e., ₹ 100).

Here, 5 = **Credit multiplier** or **deposit multiplier**.

$$\therefore \text{Credit multiplier} = \frac{1}{\text{CRR}}$$

When CRR = 20%, then credit multiplier = $\frac{1}{20\%} = \frac{1}{\frac{20}{100}} = 5$

When CRR = 10%, then credit multiplier = $\frac{1}{10\%} = \frac{1}{\frac{10}{100}} = 10$

■ **Banks create money collectively** : If the discussion above is followed carefully, it will be seen that banks create deposits (or money) collectively. No one bank can 'create' money on its own. Suppose, in our example, that bank-'X' is the only bank in the country. Then the individual who gets a cheque of ₹ 80 from the businessman will have to take the cheque to bank-'X'. If this person has an account with this bank, the cheque will be deposited into his account. ₹ 80 will be transferred from the businessman's account to this person's account but there will be no change in the amount of total deposits. Thus, we see that it is the banking system as a whole that creates credit or money. No particular bank can do so on its own.

■ **Limitations of credit creation** : From the above discussion, we can also indicate the limitations of the process of credit creation.

(a) **Lack of banking habits** : The development of people's banking habits is a limitation to this process. When a businessman meets his business expenses, his payees may refuse to accept cheques. The businessman will then have to encash his own cheques from the bank and make payments in cash. Again, the payees may not deposit the money into banks but may meet their own expenses in cash or simply hold the cash. In such cases, the banking system cannot generate the process of credit creation that we have described above.

(b) **Higher cash reserve ratio** : The amount of credit creation obviously depends on the cash reserve ratio. If the central bank increases this ratio, the amount of credit created by the banks will decline.



- (c) **Inadequate collateral securities:** Banks do not grant credit without enough collateral security. Hence, the amount of credit creation is also limited by the total amount of mortgageable assets in the country.
- (d) **Economic depression:** The market conditions also have their effects on credit creation. If there is a depression in the market (an excess supply situation), businessmen would not be eager to get bank credit even if banks are willing to lend. Banks cannot create deposits under these circumstances.

1.3.5. Money Multiplier: Relation with High-Powered Money & Balance Sheet of commercial banks

We have already discussed the process of credit creation by the commercial banks in an economy as well as the concept of credit multiplier. We shall now discuss the concept of money multiplier. If there is an increase in the High-Powered Money (H) in the economy, then the total supply of money (M) may rise by a multiple of that original rise in H.

So, $M = mH$ where, m = money multiplier.

In this analysis, we can assume that:

- There remains ample demand for bank loans (i.e. if a commercial bank wants to give loan then it would surely find a borrower).
- All the deposits with the commercial banks are chequeable deposits;
- The cash reserve ratio can be assumed to be 20% of total deposits with the commercial bank;
- The assets of commercial banks consist only of commercial loans;
- Deposits are the only form of money (i.e., the public does not hold currency);
- Banks do not want to hold any excess reserves.

Let us first consider the Balance Sheet of the Central Bank of a country (say, the RBI). A balance sheet is a statement of assets and liabilities of any business enterprise.

Balance Sheet of the RBI

Assets	(₹ in crore)	Liabilities	(₹ in crore)
1. Loan to the Government (against Govt. securities)		1. Currency held by the public (or currency in circulation)	
2. Loan to the commercial banks		2. Vault cash held by the commercial banks	
3. Gold reserve		3. Deposits of commercial banks with the RBI	
4. Foreign Exchange reserve		4. Treasury deposits of the Govt. of India	
Total Assets		Total Liabilities	

Now, from the accounting point of view, total assets must always be equal to total liabilities. For simplicity's sake, let us assume that the treasury deposit of the government of India with the RBI remains zero.

So, total liabilities of the RBI or the High-Powered Money consists of (i) Currency held by the public (C) and (ii) Reserves (R) of the commercial banks (consisting of vault cash held by the commercial banks + deposits of commercial banks with the RBI).

$$\therefore H = C + R$$

[It is important to note that total liabilities and total assets would always match in accounting sense. Hence, total assets of the Central Bank, viz, credit to the government, credit to commercial banks, foreign exchange reserve etc. also signify the monetary base of the economy.]



Now, if the assets of the RBI increase through giving more loan either to the government or to the commercial banks, then the liabilities of the RBI would also rise (i.e., the High-powered Money would also rise.)

We know that the total supply of money (M) in an economy consists of both currency held by the public (C) and the demand deposits of the commercial banks (D).

$$\therefore M = C + D$$

We know that the balance sheet of a commercial bank is as follows:

Balance Sheet of a Commercial Bank

Assets	(₹ in crore)	Liabilities	(₹ in crore)
A. Cash Reserves		A. Deposits	
(i) Vault cash		(i) Demand deposits	
(ii) Deposits with RBI		(ii) Time deposits	
B. Bank credit			
(i) Loans			
(ii) Investments			
Total Assets	=	Total Liabilities	=

Let $\beta = \frac{C}{D}$ = Currency-deposit ratio (CDR or the cash-deposit ratio)

and $\alpha = \frac{R}{D}$ = Reserve-deposit ratio (RDR or the CRR or the required reserve ratio).

(Here, $0 < \alpha < 1$, say, 20% or 0.20)

The CDR refers to the ratio of money held by the public in currency to that they hold in bank deposits. On the other hand, RDR refers to the proportion of total deposits that the commercial banks keep as reserves (to meet both the statutory reserves and meeting the demand for cash withdrawals by the public).

$$\therefore \frac{M}{H} = \frac{C+D}{C+R} = \frac{\frac{C}{D}+1}{\frac{C}{D}+\alpha} = \frac{\beta+1}{\beta+\alpha}$$

Since, $0 < \alpha < 1$ so, $\frac{\beta+1}{\beta+\alpha} > 1$

$$\text{or, } \frac{M}{H} = m = \frac{\beta+1}{\beta+\alpha} > 1 \quad [\because M = mH]$$

$$\text{or, } \frac{M}{H} > 1$$

$$\text{or, } M > H$$

Please note that when $H = R$ and $M = D$ [i.e., $C = 0$] then $\frac{M}{H} = \frac{D}{R} = \frac{1}{\alpha}$ [$\because \alpha = \frac{R}{D}$]

$$\text{or, } M = \frac{1}{\alpha} \cdot H$$

Here, the value $\frac{1}{\alpha}$ will be considered as money multiplier which is same as credit multiplier we have already discussed. For example, the Economic Survey Report (2003-04) of the Government of India indicated that the value of this money multiplier in India increased from 4.43 in 2002 to 4.58 in 2003.

It implies that if there is an increase in H , then there would be about 4.58 times rise in M in the economy.

Example 1 :

If the money supply = ₹ 150 billion and the base money = ₹ 80 billion then money multiplier will be $(150 \div 80) = 1.875$.

Example 2 :

If the money supply = ₹ 381.82 billion, the base money = ₹ 75 billion, cash-deposit ratio = 12%, then the value of the required reserve ratio will be as follows :

We know that $\frac{M}{H} = \frac{\beta+1}{\beta+\alpha}$ where

β = Cash-deposit ratio = 12% = 0.12,

M = Money supply = ₹ 381.82 billion,

H = High-powered or base money = ₹ 75 billion,

α = Required reserve ratio.

$$\therefore \frac{381.82}{75} = \frac{0.12+1}{0.12+\alpha}$$

$$\alpha, 5.09 = \frac{1.12}{0.12+\alpha}$$

$$\alpha, 5.09(0.12 + \alpha) = 1.12$$

$$\alpha, 0.61 + \alpha 5.09 = 1.12$$

$$\alpha, \alpha 5.09 = 1.12 - 0.61 = 0.51$$

$$\alpha, \alpha = \frac{0.51}{5.09} = 0.10 = 10\%$$

1.3.6. Sterilization by Central Bank

The term sterilization is concerned with monetary policy of central bank or monetary authority in an open economy with foreign trade and cross-border flow of capital (which essentially comprises both the inward and outward foreign investments). To this end, the context of sterilization arises when the central bank or monetary authority is engaged in stabilizing exchange rate (the value of foreign currency in term domestic currency and vice versa) against volatility or fluctuation in magnitude of foreign trade and capital flow in and out. Now, such intervention in exchange rate impacts Central Bank's net holding of foreign currency and foreign currency denominated assets or in foreign exchange reserve. For example, if the exchange rate or the value of every dollar relative to rupee tend to rise too sharply due to adverse external sector condition led by deficit in the balance of payments account of India as against USA (BoP) [this particular phenomenon is referred to as depreciation of domestic currency or depreciation of rupee for India], then Central Bank or RBI will act to prevent such rise in exchange rate by selling off dollars from its reserve and to that extent, the net foreign exchange holding of RBI will contract. Similarly, in the event of surplus in Balance of Payments (BoP) and consequently, the rupee-dollar exchange rate tending to fall too sharply [the phenomenon being referred to as appreciation of domestic currency] central bank responds to it by buying out the dollar excess and as a result, its net holding of foreign exchange will increase.

It is to be noted in this regard that such intervention by Central Bank essentially characterises the managed-float exchange rate system, wherein Central Bank seeks to maintain the exchange rate within



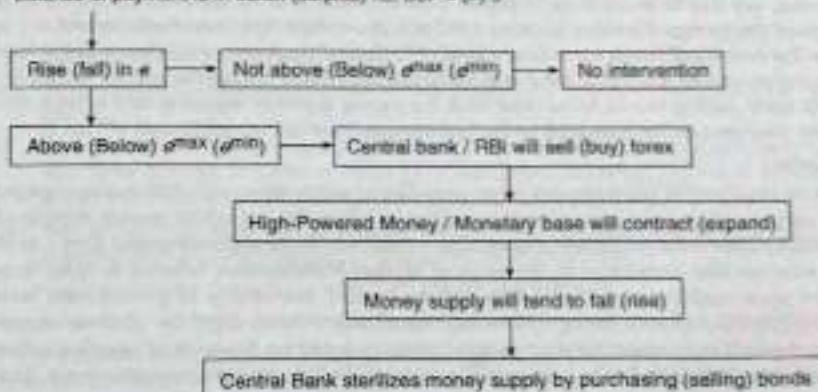
a given range and accordingly decides on when to intervene and how. Now, given that holding of foreign exchange reserve by Central Bank is an asset for itself, any change in the level of holding due to intervention in foreign exchange market will amount to change in the total amount of asset at the disposal of Central Bank and therefore has to be counterbalanced by proportionate change in Central Bank's liability to keep with the balance sheet equilibrium [the equality of total balance in the asset side of the balance sheet with that in the liability]. Hence, it is obvious hereby, that in the event of Central Bank's buying out (selling off) dollar from (in) the foreign exchange market consequent upon a tendency of exchange rate to overshoot (fall below) the upper (lower) threshold, there will happen an expansion (a contraction) of monetary base and hence, an increase (a decrease) in money supply through money multiplier. Now this feedback on foreign exchange rate intervention on money supply may not be desirable, in case it disrupts the macroeconomic order or internal balance. In particular, when money supply increases due the RBI's purchase of foreign exchange to prevent rupee from appreciating beyond the targeted threshold, price level may shoot off in motion an inflationary pressure in the economy. Moreover, it can so happen that when the prices are inflexible (as what is likely to be true during short-run) monetary effect of exchange rate intervention leads to fluctuation in interest rate in as much as it derives from money market condition (as Keynes argued that interest rate is a monetary phenomenon at large) and consequently, a volatility in consumption spending and investment. This therefore creates a dilemma or a conflict between the internal and the external balance objectives of macroeconomic policy as is the case for an open economy, to which central bank or RBI is a party as the monetary authority in its pursuit of monetary policy. Thus, the sterilization can be essentially viewed as a means to resolve or mitigate this very policy dilemma.

Now let us come to the working of sterilization mechanism. Following the increase (decrease) in money supply as the obvious repercussion of buying (selling) of foreign exchange by RBI to prevent rupee from appreciating (depreciating) too high (low), on the other side RBI will start selling (buying) bonds through open market operation (OMO) window to suction off (pump in) liquidity so as to restore the monetary equilibrium. Hence, we come to define sterilization as the buying or selling bonds by central bank or RBI in order to offset or negate the impact on money supply of its intervention with exchange rate between domestic currency or rupee and foreign currency or dollar (or exchange rate (e) management).

• Intuitive logic :

Let us suppose that central bank targets to limit the rise in exchange rate (i.e. the depreciation of domestic currency against the foreign currency) up to $e^{\max}$, while resist the fall in exchange rate (i.e. the appreciation of domestic currency) at $e^{\min}$. Now the logic underlying sterilization is as follows :

• Balance of payment is in deficit (surplus) i.e. $BoP < (>) 0$



● Diagrammatic Illustration :

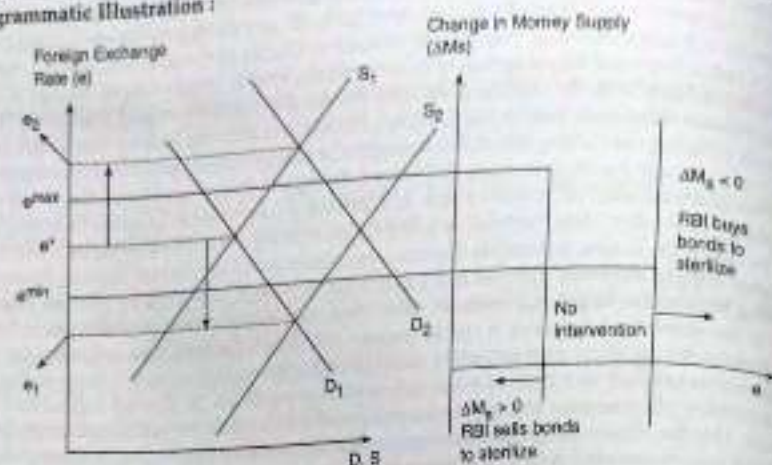


Fig.-1.1

The conduct of sterilization of money supply as against the exchange rate intervention by Central Bank or RBI, has been illustrated in Fig.-1. Herein, it has been assumed that the market exchange rate remains within the target range of Central Bank for forex intervention, to begin with, say at e^* [where demand for forex D_1 is equal to its supply S_1]. Now suppose due to an exogenous rise in import bill the demand for forex goes up leading to the rightward shift of demand schedule to D_2 , resulting in excess demand for forex at the prevailing exchange rate e^* . As a result, the domestic currency will be less valuable in terms of foreign currency, causing the latter to be dearer against the former and thereof the exchange rate will tend to rise to clear of the forex market. Now, the question of Central Bank's intervention only when exchange rate tends to overshoot the upper threshold e^{max} and in such case Central Bank sells off foreign exchange from its forex reserve, causing the monetary base to contract and so the money supply. This is what has been essentially articulated in the right panel of Fig.-1, wherein, for an increase value of equilibrium exchange rate to the right (e^{max}), the forthcoming change in money supply will be, $\Delta M_s < 0$. Now to negate such contraction in money supply Central Bank takes itself into purchase of bond through OMO. Similarly, in the event of supply of foreign exchange rising, say due to an increase in export volume, from S_1 to S_2 , the domestic currency goes stronger against the foreign currency to cause a fall in e . Now if the downward adjustment in e is so much so that the new equilibrium e comes at a level e^{min} , Central Bank comes into buy out the foreign exchange excess in supply, leading to the rise in money supply. Thus, to keep the money supply intact Central Bank starts selling bonds to transfer back the excess liquidity injection into system due to exchange rate intervention [as indicated in the bottom quadrant of the right panel of Fig.-1].

● Case of India :

The practice of sterilization has been rife since post-liberalisation time with RBI being engaged in buying and selling of bonds or government securities to offset the impact on money supply of its effort to stabilize rupee-dollar exchange rate against volatility in trade and investment flows. In 2002, a dedicated window was introduced in the name of Market Stabilization Scheme in order to relax the constraint upon sterilization activity imposed by limited availability of government bonds/securities. The principal motive facing RBI behind sterilization stems from the obvious monetary consequence of its effort to resist the sharp appreciation in rupee on the back of massive inflow of foreign capital since 2002, in what is a perceptible threat to India's export competitiveness. During



2007-08, RBI took itself into selling ₹ 2.5 lac worth of securities as under the sterilization window in the back drop of mammoth inflow of capital into India from developed countries, particularly, US (which was reeling under an abject financial instability stemming from the rising default on mortgage-backed debts/securities led by crash in housing price bubble).

1.3.7. Balance sheet of the commercial banks and accounting of money supply

Let us first present the Balance Sheet of Commercial Banks as shown

Table-1.1
Balance sheet of commercial banks

Liabilities	Assets
1. Demand liabilities ¹ [(i) + (ii) + (iii)]	1. Domestic credit (1a + 1b)
(i) Current deposits	1a. Credit to government (1a ₁ + 1a ₂)
(ii) Demand liabilities portion of savings bank deposits	1a ₁ Investment in short-term ⁴ government securities
(iii) Other demand liabilities ²	1a ₂ Investment in long-term ⁵ government securities
2. Time liabilities [(iv) + (v) + (vi) + (vii) + (viii)]	1b. Credit to commercial sector (1b ₁ + 1b ₂ + 1b ₃)
(iv) Fixed deposits	1b ₁ Bank credit in India in rupees and foreign currency ⁶
(v) Cash certificates	1b ₂ Investments in other approved ⁷ securities
(vi) Cumulative and recurring deposits	1b ₃ Other investments
(vii) Time liability portion of savings bank deposits	1c. Net foreign currency assets of commercial banks ⁸
(viii) Other time liabilities ⁹	1d. Cash with banks
3. Share capital (paid-up capital) ⁹	
4. Reserves & surplus	

● Some relevant notes on the balance sheet :

- Liabilities payable on demand.
- Other demand liabilities comprising overdue fixed deposits, demand drafts etc.
- Time liabilities like Certificate of Deposit.
- Short-term refers to a period of 1 year or less.
- Long-term refers to a period exceeding 1 year.
- Bank credit including loans and advances, cash credit, overdraft, bills purchased and discounted etc.
- Approved securities are those that banks are required to hold a minimum proportion of demand and time liability in form of cash, gold and unencumbered approved securities (including government securities) at the closure of business on any day.
- Net foreign currency assets include foreign currency asset net of non-residents' current repatriable fixed deposits and foreign currency borrowings.
- Capital account consisting of paid-up capital and reserves.

● Accounting of Money Supply and its relation with balance sheet of commercial banks :

Now we shall look into how the accounting supply of money derives from the balance sheet of commercial banks. To this end one has to recognise the manner in which the economic agents of



than banks or non-bank public hold their savings or wealth portfolio. In this regard, we know people hold their savings partly in liquid form in terms of cash/currency and partly in bank deposit (note: other instruments of savings holding such as bond or shares, or physical assets like land or gold are being assumed away for the time). Suppose, that the ratio of currency holding to deposit holding is given as 'h', then in reference with the broad measure of money supply, we land up on the following relation.

$$M_1 = C + D = (1 + h) D \quad [\text{since, } C/D = h]$$

Now given that 'h' is the portfolio ratio that people choose to maintain on an average between currency holding and deposit holding, it is of much reason to introduce the context of interest rate as return on deposit holding in this regard. In particular, an increase in interest rate can be viewed as increase in return on bank deposit so much so that it gets to become more lucrative as an option of wealth accumulation to non-bank public relative to currency holding. Hence, reallocation in portfolio is forthcoming in the event of rise in interest rate, from currency to deposit holding and thereby a change in money supply to come about. Similarly, an unanticipated spike in economy's overall inflation rate will lower the real return on deposit and therefore can potentially induce a portfolio reallocation towards cash-holding and correspondingly, an alteration in money supply.

1.3.8. Different multipliers of the commercial banking system

The creation of credit /deposit is one of the most important functions of commercial banks. Like other corporations, banks lend with a business motive. For this purpose they accept cash as demand deposits and advance loans to customers or account holders. When a bank advances a loan, it does not pay the amount in cash, but it opens a current account in his name and allows him to withdraw the required sum by cheques. In this way, the bank creates credit /deposit.

For a detail analysis, we may start with the expression to the stock of money.

The money multiplier $\{1 + \beta / (\alpha + \beta)\}$ reflects in fact the lending activities of banks and a part of the money stock that results from bank's lending. Let us assume that the high powered money has been increased by one rupee through an open market purchase of securities. The individual who has sold the bond to the Central Bank is paid a cheque which he can deposit to his bank. But he, like all portfolio holders, has a currency-deposit ratio (β). Therefore out of 1 rupee that he has received from the Central Bank, he wants to keep a fraction in the form of currency holding.

We have, $C + D = M$

$$\text{or, } C + \left(\frac{C}{\beta}\right) = M \quad \left[\text{Since } D = \frac{C}{\beta}\right]$$

$$\text{or, } C \left\{1 + \left(\frac{1}{\beta}\right)\right\} = M$$

Therefore, $C = \beta / (1 + \beta) M$

Here, $M = 1$ and thus $C = \beta / (1 + \beta)$.

At this stage, the money stock has increased by only one rupee as a result of an increase in the stock of high powered money. The bank also has increased its deposits by

$$D = 1 - C = [1 - \beta / (1 + \beta)] = 1 / (1 + \beta)$$

The bank does not want to hold the entire of extra amount $(1 / (1 + \beta))$ in the form of reserves. The reserve-deposit ratio being α , it wants to hold only α proportion of the extra amount $(1 / (1 + \beta))$ which it has received in the form of deposit. It keeps $(\alpha / (1 + \beta))$ as reserve. It wants to hold the rest of the



amount in other form, and we assume that the bank lends out the rest amount as bank loans. So, the volume of bank loan is,

$$[1 / (1 + \beta)] - [\alpha / (1 + \beta)] = [(1 - \alpha) / (1 + \beta)]$$

For simplicity we assume that the borrower receives the loan in the form of currency. It is at this stage, the bank's lending activities can increase the stock of money by more than the increase in high powered money.

The person taking the loan does not spend the whole amount. The person receiving $[(1 - \alpha) / (1 + \beta)]$ now wants to hold a fraction $[\beta / (1 + \beta)]$ as currency and $[1 / (1 + \beta)]$ as bank deposits but out of that amount deposited the bank will hold $[\alpha / (1 + \beta)]$ as reserve and lend out a fraction $[(1 - \alpha) / (1 + \beta)]$. Thus, the process will keep on moving for several rounds.

Following a rise in the high powered money (H) by one rupee, the following table shows increments in currency holding by public, chequeable deposits in the banks, reserves of the banks and loans made by the banks given the currency-deposit ratio (β) and reserve-deposit ratio (α):

INCREASE IN "H"	INCREASE IN CURRENCY HOLDING (C)	INCREASE IN DEPOSIT (D)	INCREASE IN RESERVE (R)	INCREASE IN BANK LOANS	ROUND
₹ 1	$\frac{\beta}{1+\beta}$	$\frac{1}{1+\beta}$	$\frac{\alpha}{1+\beta}$	$\frac{1-\alpha}{1+\beta}$	1
	$\frac{\beta}{1+\beta} \frac{1-\alpha}{1+\beta}$	$\frac{1}{1+\beta} \frac{1-\alpha}{1+\beta}$	$\frac{\alpha}{1+\beta} \frac{1-\alpha}{1+\beta}$	$\frac{1-\alpha}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)$	2
	$\frac{\beta}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^2$	$\frac{1}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^2$	$\frac{\alpha}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^2$	$\frac{1-\alpha}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^2$	3
	$\frac{\beta}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^n$	$\frac{1}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^n$	$\frac{\alpha}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^n$	$\frac{1-\alpha}{1+\beta} \left(\frac{1-\alpha}{1+\beta}\right)^n$	n + 1
	$\frac{\beta}{1+\beta} (\text{sum})$	$\frac{1}{1+\beta} (\text{sum})$	$\frac{\alpha}{1+\beta} (\text{sum})$	$\frac{1-\alpha}{1+\beta} (\text{sum})$	Total
	$\frac{\beta}{\alpha+\beta}$	$\frac{1}{\alpha+\beta}$	$\frac{\alpha}{\alpha+\beta}$	$\frac{1-\alpha}{\alpha+\beta}$	After substituting from sum

where, $\text{sum} = 1 + (1 - \alpha) / (1 + \beta) + [(1 - \alpha) / (1 + \beta)]^2 + \dots + [(1 - \alpha) / (1 + \beta)]^n$

When $n \rightarrow \infty$, $\text{Sum} = (1 + \beta) / (\alpha + \beta) = m$

Since, $H = C + R$

$$\Delta H = \Delta C + \Delta R$$

$$= \left\{ \beta / (\alpha + \beta) \right\} + \left\{ \alpha / (\alpha + \beta) \right\} = 1$$

That is the increase in the volume of high powered money $\Delta H = 1$



On the other hand,

$$\Delta M = \Delta C + \Delta D = \left[\frac{\beta}{\beta + 1} \right] H + \left[\frac{1}{\beta + 1} \right] H \\ = \left[\frac{\beta + 1}{\beta + 1} \right] H$$

So, Money Multiplier $\frac{\Delta M}{\Delta H} = \frac{\beta + 1}{\beta + 1}$

Example :

Suppose that monetary base is ₹ 20,000, reserve deposit ratio is 0.1, currency deposit ratio is 0.4. Find the total money supply in the economy. (CU, ECOA, 2012)

Solution :

We know,

$$M = \left[\frac{\beta + 1}{\beta + \alpha} \right] H$$

$$\text{So, } M = \left[\frac{0.4 + 1}{0.4 + 0.1} \right] \times 20,000 \\ = \frac{1.4}{0.5} \times 20,000 = 56,000$$

where, M = money supply, H = monetary base, β = currency-deposit ratio, α = reserve deposit ratio.

Example :

Suppose that the required reserve ratio is 0.12 for deposits and there are no excess reserves. Suppose also that the total demand for currency is equal to 0.3 times deposits. (CU, ECOA, 2012)

- (a) If the total reserve is ₹ 40 billion, what is the level of money supply?
 (b) By how much will the money supply change if RBI buys Government bonds worth ₹ 1 billion from the open market?

Solution :

- (a) Let M = money supply, H = monetary base, β = currency-deposit ratio, α = reserve deposit ratio

So, here $\alpha = 0.12$ or $\frac{R}{D} = 0.12$ where R = total reserves, and D = total deposits.

$$\text{or, } D = R/0.12 \text{ or, } D = 40/0.12 \text{ Thus, } D = 333.33 \text{ billion}$$

$$\text{Again, } C = 0.3 \times D$$

$$\text{or, } C = 0.3 \times 333.33$$

$$\text{or, } C = 100 \text{ Billion}$$

$$\text{So, } M = C + D = 433.33 \text{ Billion}$$

- (b) If RBI buys Government bonds worth ₹ 1 billion from the open market then monetary base rises by ₹ 1 billion.

We know,

$$M = \left[\frac{\beta + 1}{\beta + \alpha} \right] H \text{ where } H = \text{monetary base and } M = \text{total money supply.}$$

$$\text{So, } \Delta M = \left[\frac{\beta + 1}{\beta + \alpha} \right] \cdot \Delta H = \left[\frac{0.3 + 1}{0.3 + 0.12} \right] \times 1 = 3.095 \text{ billion.}$$



Example :

Suppose the cash-reserve ratio of commercial bank is 1/3 and the currency-deposit ratio of the public is also 1/3. Under this condition, if the government takes a loan of ₹ 100 from the Central Bank and spent all of it, then by how much will the money supply increase? (CU, ECOA, 2010)

Solution :

$$\text{We know that money multiplier (mm) = } \left[\frac{\beta + 1}{\beta + \alpha} \right]$$

$$\text{Here, } \beta = \frac{1}{3} = 0.3 \text{ and } \alpha = \frac{1}{3} = 0.3$$

$$\text{So, mm} = \left[\frac{\beta + 1}{\beta + \alpha} \right] = \frac{1.3}{0.6} = 2.16$$

If the government takes a loan of hundred rupees from the Central Bank and spent all of it then it raises the monetary base of the economy by ₹ 100. So, $\Delta H = 100$

$$\text{We know, } M = mm \times H$$

$$\text{Or, } \Delta M = mm \times \Delta H = 2.16 \times 100$$

$$\text{So, } \Delta M = 216$$

[*We can also calculate rest of the multiplier and increase in C, R and D]

1.3.9. Multiple deposit creation

So far we have discussed how the commercial banking system as a whole can create credit. Now we can also think of a situation where the commercial banks want to hold excess reserves in addition to the required reserves or the statutory reserves.

$$\text{Thus, total reserves of the commercial banks (R) = RR + ER} \quad (1)$$

where RR = Required reserve, ER = Excess reserve

$$\text{Let } RR = \alpha D \quad (2) \text{ where } \alpha = \text{required reserve to total deposit (D) ratio, i.e. } \alpha = \frac{RR}{D}$$

$$\text{and } ER = \gamma D \quad (3) \text{ where } \gamma = \text{Desired excess reserve ratio, i.e. } \gamma = \frac{ER}{D}$$

$$\text{Therefore, } R = \alpha D + \gamma D = D(\alpha + \gamma) \quad (4)$$

We also know that the total money stock (M) = $C + D$ where C = Currency held by the public, and D = Deposits with the commercial banks. The public holds C as well as D . On the other hand, the monetary base or the high-powered money (H) = $C + R$.

Now, we can explain the concepts of (i) Complete Deposit Multiplier, (ii) Complete Currency Multiplier and (iii) Complete Money Multiplier. In each of these multipliers, we try to show the impact of a change in the monetary base (H) upon the aggregate deposits (D) of the commercial banks, the currency held by the public (C) and upon the total money supply (M) of the economy.

Let us assume that the Central Bank is involved in an open market purchase of securities (under its quantitative credit control operation). Let us also assume that the seller of such security receives a cheque worth ₹ 10 lakhs which he/she deposits with his/her commercial bank. As a result, the deposit with the commercial bank will rise by ₹ 10 lakhs, and if it is assumed that the required reserve ratio to be maintained by the commercial banks is $\alpha = 20\% = 0.2$, then the loanable fund with the commercial bank will rise by ₹ 8 lakhs. Let us also assume that the security sellers wish to keep 25% of their deposits in the form of currency, i.e. $\beta = 25\% = 0.25$; and the commercial banks desire to maintain an excess reserve ratio $\gamma = 5\% = 0.05$.

Complete deposit multiplier:

Now, let us show the process of deriving the complete deposit multiplier as follows:

We know that high-powered money (H) = $C + R = \beta D + (\alpha + \gamma)D = (\alpha + \beta + \gamma)D$ (6)

$$\text{So, } D = \frac{1}{(\alpha + \beta + \gamma)} H \text{ (6)}$$

Now, let us assume that $H = ₹ 350$ crore, $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$

$$\text{Therefore, } D = \frac{1}{(0.2 + 0.25 + 0.05)} \times 350 = \frac{1}{(0.5)} \times 350 = 2 \times 350 = ₹ 700 \text{ crore.}$$

Thus, given the values of α , β and γ if there is a change in the high-powered money (denoted by ΔH) then the resultant change in total deposits with the commercial banks (denoted by ΔD) would indicate the complete deposit multiplier. This is shown below:

$$\Delta D = \frac{1}{(\alpha + \beta + \gamma)} \Delta H \text{ (7)}$$

Here, $\frac{1}{(\alpha + \beta + \gamma)}$ signifies the complete deposit multiplier.

Here, if $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$ and the high-powered money is increased by ₹ 10 crore then

$$D = \frac{1}{(0.2 + 0.25 + 0.05)} \times 10 = \frac{1}{(0.5)} \times 10 = 2 \times 10 = ₹ 20 \text{ crore}$$

Thus, the complete deposit multiplier becomes 2.

Here, if $\beta = \gamma = 0$ then $\Delta D = \frac{1}{(\alpha)} \Delta H$ and here $\frac{1}{(\alpha)}$ signifies the simple deposit multiplier (or the credit multiplier).

Here in equation (7) the strength of the complete deposit multiplier would depend on the values of α , β and γ . If α or β or γ or all/part of them increase then $\frac{1}{(\alpha + \beta + \gamma)}$ will fall and vice versa.

Complete currency multiplier:

Let us now show the process of deriving the complete currency multiplier:

We know that $C = \beta D$ or, $D = \frac{C}{\beta}$

Now, substituting this value of D in equation (6) we get,

$$\frac{C}{\beta} = \frac{1}{(\alpha + \beta + \gamma)} H$$

$$\text{or, } C = \frac{\beta}{(\alpha + \beta + \gamma)} H \text{ (8)}$$

Now, if $H = ₹ 350$ crore, $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$ then

$$C = \frac{0.25}{(0.2 + 0.25 + 0.05)} \times 350 = \frac{0.25}{(0.5)} \times 350 = 0.5 \times 350 = ₹ 175 \text{ crore}$$

Thus, given the values of α , β and γ if there is a change in the high-powered money (denoted by ΔH) then the resultant change in currency held by the public (denoted by ΔC) would indicate the complete currency multiplier. This is shown below:

$$\Delta C = \frac{\beta}{(\alpha + \beta + \gamma)} \Delta H \text{ (8)}$$



Here, $\frac{\beta}{(\alpha + \beta + \gamma)}$ shows the complete currency multiplier.

We have seen that given $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$ the magnitude of the complete currency multiplier would be $\frac{0.25}{(0.2 + 0.25 + 0.05)} = \frac{0.25}{(0.5)} = 0.5$

Now, if the high-powered money is increased by ₹ 10 crore then the change in C would be $\Delta C = 0.5 \times 10 = ₹ 5$ crore.

Complete money multiplier:

Let us now show the process of deriving the complete money multiplier:

The complete money multiplier shows how the money stock in the economy will change consequent upon a change in the high-powered money.

We know that

$$D = \frac{1}{(\alpha + \beta + \gamma)} H \text{ and } C = \frac{\beta}{(\alpha + \beta + \gamma)} H$$

Since the money stock (M) = $C + D$ hence, from the above two expressions we get:

$$M = C + D = \left[\frac{1 + \beta}{(\alpha + \beta + \gamma)} \right] H \text{ (9)}$$

This expression shows how the total stock of money becomes a multiple of the monetary base. Thus, if the monetary base or the high-powered money changes by ΔH then the money stock in the economy would change by ΔM , and we get the following relation:

$$\Delta M = \left[\frac{1 + \beta}{(\alpha + \beta + \gamma)} \right] \Delta H \text{ (10)}$$

Here, the term $\left[\frac{1 + \beta}{(\alpha + \beta + \gamma)} \right]$ signifies the complete money multiplier. This result also shows that

$$\Delta M = \Delta C + \Delta D$$

Now, if $H = ₹ 350$ crore, $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$ then

$$M = \frac{1 + 0.25}{(0.2 + 0.25 + 0.05)} \times 350 = \frac{1.25}{(0.5)} \times 350 = 2.5 \times 350 = ₹ 875 \text{ crore}$$

Now, if the high-powered money is increased by ₹ 10 crore then the change in M would be $\Delta M = 2.5 \times 10 = ₹ 25$ crore

Example:

If there is an open market sale of Treasury Bill by the Central Bank worth ₹ 1 lakh then what would be the changes in deposits with the commercial banks, currency held by the public and money stock? Here it is assumed that $\alpha = 0.1$, $\beta = 0.25$ and $\gamma = 0.05$ where α = Required Reserve Ratio of the commercial banks, β = Currency-deposit ratio and γ = desired excess reserve to total deposit ratio of the commercial banks.

Solution:

Here, the open market sale of Treasury Bill by the Central Bank implies a reduction in monetary base. Thus, the monetary base or the high-powered money (H) declines by ₹ 1,00,000.

We know that $\Delta D = \frac{1}{(\alpha + \beta + \gamma)} \Delta H$ where ΔD denotes the change in deposits of the commercial banks.

So, in this case, $\Delta D = \frac{1}{(1+0.25+0.05)} \times (-11,00,000) = \frac{1}{1.3} \times (-11,00,000) = 2.5 \times (-11,00,000)$

$\Delta D = (-) ₹ 2,75,000$. It implies that as the Central bank makes an open market sale of Treasury Bill worth ₹ 1,10,000, total deposits with the commercial banks will fall by an amount of ₹ 2,75,000.

Again, we know that $\Delta C = \frac{\beta}{(\alpha+\beta+\gamma)} \Delta H$

So, in this case, we get $\Delta C = \frac{0.25}{(0.1+0.25+0.05)} \times (-11,00,000) = \frac{0.25}{0.4} \times (-11,00,000) = 0.625 \times (-11,00,000)$

So, $\Delta C = (-) ₹ 62,500$. It implies that as the Central bank makes an open market sale of Treasury Bill worth ₹ 1,10,000, total currency held by the public will fall by an amount of ₹ 62,500.

Again, we know that $\Delta M = \left[\frac{1+\beta}{(\alpha+\beta+\gamma)} \right] \Delta H$

Therefore, we get $\Delta M = \frac{1+0.25}{(0.1+0.25+0.05)} \times (-11,00,000) = \frac{1.25}{0.4} \times (-11,00,000) = 3.125 \times (-11,00,000)$

So, $\Delta M = (-) ₹ 3,12,500$. It implies that as the Central bank makes an open market sale of Treasury Bill worth ₹ 1,10,000, total money stock will fall by an amount of ₹ 3,12,500.

1.3.10. Determinants of money supply

Based on our foregoing discussion we can now indicate the determinants of money supply. Let us consider the money supply equation which determined the complete money multiplier:

$$M = \left[\frac{1+\beta}{(\alpha+\beta+\gamma)} \right] H$$

This equation clearly shows that following are the determinants of money supply in an economy:

- The required reserve to total deposit (D) ratio (α) of the commercial banks;
- The currency deposit ratio (β);
- The desired excess reserve ratio of the commercial banks (γ); and
- The monetary base or the High-Powered money (H).

Central Bank's determinants of money supply:

Among these determinants, the Central Bank's determinants of money supply are:

- The High-Powered money (H), and
- The required reserve ratio (α) to be maintained by the commercial banks with the Central Bank.
- The High-Powered money (H):** The Central Bank can influence the money supply through changes in H or through a change in α . The Central Bank can increase (decrease) the monetary base through its open market purchase (sale) of government securities or Treasury Bills. As H rises (falls), the money supply (M) rises (falls) through the operation of complete money multiplier.
- The required reserve ratio (α):** The Central Bank can also change the required reserve ratio (α) of the commercial banks to influence the money supply. Given the monetary base (H), if the Central bank raises the required reserve ratio then the magnitude of the complete money multiplier will fall, and hence, the money supply will fall. Similarly, the Central bank reduces the required reserve ratio then the magnitude of the complete money multiplier will rise, and hence, the money supply will rise.



Determinants of money supply related to the banking system:

Again, the determinant of money supply related to the banking system is the desired excess reserve ratio (γ) of the commercial banks.

Desired excess reserve ratio (γ): If this desired excess reserve ratio (γ) rises, then the loanable fund with the commercial banks and the loans extended by the commercial banks will fall and the result will be a fall in money supply through a fall in complete money multiplier. Generally, changes in the market rate of interest (r) on loans, the risk of sudden withdrawal of bank deposits (from commercial banks) (say, denoted by δ) and the interest rate on the sources of borrowed fund (r_b) can lead to a change in the desired excess reserve ratio (γ) of the commercial banks.

- Changes in the market rate of interest (r) on loans:** If there is an increase in the market rate of interest (r) on loans, it would imply an increase in the opportunity cost of maintaining an excess reserve. As a result, the desired excess reserve ratio (γ) of the commercial banks will fall. Similarly, a fall in r would lead to a rise in γ .
- Risk of sudden withdrawal of bank deposits (δ):** In a similar fashion, it can be said that if there is an increase in the risk of sudden withdrawal of bank deposits (from commercial banks) then the commercial banks would try to maintain excess reserve to deal with the unexpected withdrawal of deposits. Thus, we get a positive correlation between δ and γ .
- Interest rate on the sources of borrowed fund (r_b):** Similarly, if there is an increase in interest rate on the sources of borrowed fund (r_b) (say, the repo rate on short-term borrowing or the bank rate on long-term borrowing or the short-term call rate on inter-bank borrowing) then the commercial banks find such borrowing more costly or less attractive. Hence, they try to maintain an excess reserve since the commercial banks consider their ability to borrow reserves (at times of sudden needs) as a substitute for maintaining excess reserve. Thus, we find a positive relation between r_b and γ .

Determinants of money supply related to the behaviour of common public:

We can also show some of the determinants of money supply related to the behaviour of common public. **Desired currency-deposit ratio (β):** If the common public want to make more cash transactions then the desired currency-deposit ratio (β) will rise. This behavioural pattern drains the commercial banking system of some of its resources and it ultimately reduces the complete money multiplier.

Let us consider that at the initial situation $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$; as a result, the magnitude of

the complete money multiplier (m) would be $m = \left[\frac{1+\beta}{(\alpha+\beta+\gamma)} \right] = \frac{1+0.25}{(0.2+0.25+0.05)} = 2.5$

However, if the value of β increases from 0.25 to 0.5 then the magnitude of the complete money

multiplier (m) would be $m = \left[\frac{1+\beta}{(\alpha+\beta+\gamma)} \right] = \frac{1+0.5}{(0.2+0.5+0.05)} = 2$, i.e., an increase in β reduces the strength of money multiplier.

- Interest rate on the deposits in savings bank account (r_s):** The interest rate on the deposits in savings bank account (say, denoted by r_s) (often called as chequeable deposit since one can draw a cheque on his/her savings deposit with a commercial bank) would mean an increase in the opportunity cost of holding currency. As a result, this can lead to a fall in currency-deposit ratio. Therefore, we find an inverse relationship between r_s and β .
- Fees charged by the commercial banks on savings deposit transactions (F):** Sometimes the fees (say, denoted by F) charged by the commercial banks on the services provided by the commercial banks to the customers related to transaction in savings bank account (or chequeable deposits) [say, the charges on issuing cheques, charges on ATM transactions etc.] can have an impact on

the currency-deposit ratio. Hence, if F rises then the preference for holding money in the form of currency becomes more attractive. So, we get a positive correlation between F and β .

- (iii) **The income of the account holders (Y):** The income of the account holders (say, denoted by Y) can also influence β . Normally, the people in higher income group (HIG) use their bank accounts more than those belonging to low income group (LIG). Therefore, with an increase in Y and an increase in the proportion of HIG people, the currency-deposit ratio (β) will fall since the tendency of holding money in the form of currency is expected to be less among people belonging to HIG.
- (iv) **Probability of bank failure (B_f):** Although the incidence of bank failure at present is a rare phenomenon in banking operations, any financial crisis in the economy, however, can raise the probability of its occurrence in a market-based economy. In that situation, the tendency to hold money in the form of currency is expected to rise. Thus, we get a positive correlation between B_f and β .
- (v) **Incidence of illegal transactions (I):** If a significant part of the transactions in an economy takes place without adhering to legal provisions or rules then it becomes obvious that in such an economy the tendency to hold money in the form of currency is expected to rise.

1.3.11. Money supply curve

On the basis of our foregoing discussion, we can now indicate the nature of money supply curve.

Here, we can think of the money supply on the basis of the money supply function, viz. $\left[\frac{1+\beta}{\alpha+\beta+\gamma} \right] H$.

According to one notion, the money supply in the economy is exogenous in the sense that it is not affected by changes in interest rate. That is to say, changes in interest rate do not have any impact on currency-deposit ratio (β) and desired excess reserve ratio (γ) of the commercial banks.

The exogenous money supply curve :

In this case, we can think of a situation where the commercial banks desire to maintain a given excess reserve ratio and the depositors also want to hold a given fraction of deposits as currency. Thus, the values of currency-deposit ratio (β) and desired excess reserve ratio (γ) remain independent of interest rates (r). Thus, in this case the money supply (M) would remain unaltered despite a change in the interest rate (r). Hence, the exogenous money supply curve will be vertical (Fig.-1.2).

In Fig.-1.2, M_0M_0 curve denotes the exogenous money supply curve. If there is an increase in monetary base (H) then other things remaining unchanged, this exogenous money supply curve would shift to the right from M_0M_0 to M_2M_2 . Similarly, given the monetary base, if there takes place a fall in either required reserve ratio (α) or base, if there takes place a fall in either required reserve ratio (α) or currency-deposit ratio (β) or desired excess reserve ratio (γ) then other things remaining unchanged, this exogenous money supply curve will shift to the left from M_0M_0 to M_1M_1 .

also there will be an increase in M (as indicated by the money supply equation) and the exogenous money supply curve will shift to the right. Similarly, if there is a decrease in monetary base (H) then other things remaining unchanged, this exogenous money supply curve would shift to the left from M_0M_0 to M_1M_1 . Further, given the monetary base, if there takes place a rise in either required reserve ratio (α) or currency-deposit ratio (β) or desired excess reserve ratio (γ) then other things remaining unchanged, this exogenous money supply curve will shift to the left.

The endogenous money supply curve :

As opposed to the notion of exogenous money supply curve, the notion of endogenous money supply curve suggests that changes in interest rate influences the currency-deposit ratio (β) and desired



excess reserve ratio (γ) of the commercial banks. It is argued that many commercial banks would reduce their excess reserve if there is an increase in interest on lending. In a similar fashion, several depositors will be willing to hold less currency and more of such financial assets which give higher interest rates. Thus, with an increase in the rate of interest rate (r), excess reserve ratio (γ) of the commercial banks as well as the currency-deposit ratio (β) will decline. As a result, the money supply function, viz. $M = \left[\frac{1+\beta}{\alpha+\beta+\gamma} \right] H$ would show that given the volume of H , money supply (M) will increase due to higher money multiplier. Hence, we get a positive correlation between r and M , and the endogenous money supply curve becomes positively sloped (Fig.-1.3).

In Fig.-1.3, M_0M_0 curve denotes the endogenous money supply curve. If there is an increase in monetary base (H) or a fall in required reserve ratio (α) then other things remaining unchanged, this endogenous money supply curve would shift to the right from M_0M_0 to M_2M_2 . Similarly, if there is a decrease in monetary base (H) or a rise in the required reserve ratio (α) then other things remaining unchanged, this endogenous money supply curve would shift to the left from M_0M_0 to M_1M_1 .

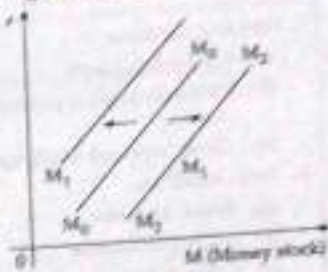


Fig.-1.3

1.3.12. Balance Sheet of any Commercial Bank & its Analysis

Normally the financial information on commercial banks are presented through two financial statements, viz., (1) the balance sheet and (2) the income statement.

The balance sheet of a commercial bank reflects the financial condition of that bank at a particular point of time (say, as on 31st March, 2021). This balance sheet shows the asset and liability positions of any commercial bank at any particular date (normally the last date of a financial year).

On the other hand, the income statement of a commercial bank shows the revenue and expenditures, the net profit or loss, the financial performance of the bank (say, return on assets, return on equity etc.) and so on over a particular period of time (say, during a financial year).

Let us now focus on the balance sheet of a commercial bank. We have seen in our example that this balance sheet has two sides : (i) the assets of the bank and (ii) the liabilities of the bank.

A close introspection of a balance sheet helps us in identifying the system that any commercial bank adopts to raise its required fund and to allocate that fund in different categories of investment.

Liabilities of commercial bank :

Let us first take into account the liabilities of a commercial bank. The liabilities of commercial banks are nothing but the claims upon it. Normally the liabilities of any commercial bank constitute the following five elements :

- (1) The share capital or the paid-up capital contributed by the shareholders of the bank;
- (2) The reserves and surplus created out of the undistributed profit of the bank over years, and it is a liability of the bank to its shareholders;
- (3) The deposits with the bank (say, the deposits made by the account holders of the bank in their respective savings and current accounts);
- (4) The borrowings of the commercial bank from other banks and from the Central Bank;
- (5) Other liabilities of the bank.



Balance sheet of a Commercial Bank (as on 31 March, 2021)

Liabilities	Assets
1. Demand liabilities : (a) Current deposits (b) Demand liability portion of the savings deposit (c) Other demand liabilities	1. Domestic credit : (a) Credit to government (investment in short-term & long-term government securities) (b) Credit to commercial sector (bank credit in INR & foreign currencies) (c) Investment in other approved securities (d) Investment in non-approved securities
2. Time liabilities : (a) Fixed deposits (b) Cash Certificates (c) Cumulative recurring deposit (d) Time liability portion of savings deposit (e) Other time liabilities	2. Net foreign currency assets
3. Share capital (paid-up capital)	3. Cash with banks
4. Reserves & surplus	4. Balances with the Central Bank
5. Call money received (borrowing from other banks)	5. Balances with other banks (domestic & foreign) 6. Call money extended to other banks 7. Other assets

Generally among all such liabilities, the bank deposits constitute the largest share. We can now discuss the types of such bank deposits. In our country, the deposits with a commercial bank can be classified broadly into two types : (i) Demand deposits and (ii) Time deposits. In case of demand deposits, the depositor (i.e. the account holder of the bank) can withdraw money from his/her account by drawing cheques on that account. Thus, demand deposit means a deposit received by the bank which is withdrawable on demand. These demand deposits can again be divided into two parts : (i) savings deposit and (ii) current deposit. These deposits are called chequeable (or checkable) deposits since the account holders can withdraw money from their respective accounts by drawing cheques whenever needed. In case of savings deposit, the account holders get an interest on the deposited amount. However, the account holders of the current account do not earn any interest on deposits, i.e. the current account is a form of non-interest bearing demand deposit. Further, the withdrawals from the current account are allowed for any number of times depending, however, on the balance remaining in the account. However, the savings account is subject to the restrictions regarding the number of withdrawals and the amount of withdrawals permitted by the bank per time period.

Further, it is important to note that the savings deposit also corresponds to demand and time liabilities for any bank. In India, before 16 August, 1978, the maximum amount withdrawable from the savings deposit without prior notice was regarded as demand liability of the bank and the excess over that maximum amount in the savings account was regarded as time liability for the bank. However, after 16 August, 1978, the average monthly minimum balance in savings account on which interest is being credited by the bank, is considered as the time liability of the bank, and the excess over the said amount is considered as demand liability of the bank.

The time deposits or the fixed deposits which cannot be withdrawn by the account holders before a fixed maturity period form the time liability of the commercial bank. The call deposits which a bank accepts from other banks for a short period (to meet its short-term fund requirements) is regarded as



a sub-category of demand deposits because this deposit is payable on demand within a short period (normally within a fortnight). Hence, call deposits can be regarded as the demand liability of a commercial bank.

Assets of a commercial bank :

Let us now throw some light upon the asset side of the balance sheet of any commercial bank. The assets of any commercial bank are as follows :

- Cash in hand,
- Balances with the Central Bank,
- Balances with other banks (within and outside the country),
- Investments in government and other approved securities,
- Bank credit to the government and commercial sectors,
- Call money extended to other banks,
- Net foreign currency deposits,
- Other assets with the bank.

In the balance sheet of a commercial bank, the most important assets from the quantitative viewpoint are the investments made by the bank and the bank credit.

Investment made by the commercial bank : The investment made by any commercial bank can be categorised into three groups : (i) Investment in government approved securities (say, in Treasury Bills), (ii) Investment in other approved securities and (iii) Investment in some non-approved securities. We know that the scheduled commercial banks in India are subject to the credit control policy of the Central bank (viz. the reserve bank of India). Therefore, whenever a commercial bank is subject to SLR (Statutory Liquidity ratio) control by the Central bank then the first two categories of securities are called as SLR securities, and the non-approved securities are considered as non-SLR securities. These non-SLR securities include shares and debentures issued by the corporate houses, mutual fund units etc.

Bank credit : The commercial banks mainly provide short-term credit to business houses and entrepreneurs for financing working capital requirements. However, in recent times, the commercial banks have also been engaged in extending term loans. So, at present, a commercial bank is engaged in retail banking as well as wholesale banking. These commercial banks are found to provide the following types of credit facilities to their customers :

- Cash credit & overdraft facility :** In case of cash credit, the account holder can withdraw fund from his/her account as and when needed subject to the credit limit sanctioned by the bank. Overdraft facility is allowed to the holders of current account in excess of the deposit with that account. The bank charges interest on the outstanding overdraft amount.
- Discounting of the bills of exchange :** The commercial banks can also extend credit facility to finance trade transactions (either domestic or foreign) by discounting the bills of exchange arising out of such trade transactions. These bills of exchange are considered to be the assets of any commercial bank. If the commercial banks require fund before the maturity period of these bills (normally 90 days from the date of execution of the bill), they can rediscount these bills with the Central Bank or with other financial houses (say, with Discount and Finance House of India or DFHI).

- (d) **Demand and term loans** : Generally, demand loan extended by any commercial bank implies that the loan amount has to be repaid to the creditor (viz. the commercial bank) whenever demanded. However, following the suggestions given by the Tendulkar Committee (Report of the Study Group to Frame Guidelines for Follow-up of Bank Credit, 1975), the demand loan signifies the minimum level of borrowing which the borrower is expected to use throughout the year (this part is regarded as the core portion of the cash credit). The demand loan also denotes the short-term loan. On the other hand, the term loans are long-term loans (normally sanctioned for a period exceeding 1 year). It also includes installment credit where repayment is spread over a period of more than 1 year. While demand loans are sanctioned to facilitate working capital requirements of any business firm, term loan is provided to facilitate the procurement of fixed assets.

1.3.12. Risks faced and Portfolio Management by a Commercial Bank

• Risks faced by the banking institutions :

The banking institutions, particularly the commercial banks, are literally exposed to different types of risk. A successful banker is one that can mitigate these risks (viz. through portfolio management) and create significant returns for the shareholders on a consistent basis. Mitigation of risk begins with the correct identification of the risks, and then with the analysis of why these risks arise and what damage they can cause to the banking institutions. Now, we can briefly discuss the major types of risks that are faced by every bank, viz. the credit risks, market risks, operational risks, risks of adverse selection and moral hazard, liquidity risks, business risks etc.

These risks are as follows :

- (1) **Credit Risks** : Credit risk arises from the possibility of non-payment of loans by the borrowers. Although credit risk is largely defined as risk of not receiving payments, the risk of delayed payments can also be included within this category. The problem of non-performing assets of the banks is closely linked with credit risks.
- If the borrower becomes insolvent then these cash flow risks become prominent. Hence, such risk can be avoided if the bank conducts a thorough screening of the credit worthiness of the borrowers and sanctions loans only to individuals and businesses that are not likely to run out of income over the recovery period of the loan. Credit rating agencies provide adequate information to enable the banks to make informed decisions in this regard.
- The profitability of a bank is extremely sensitive to credit risks. Hence, even if credit risk rises by a small amount, the profitability of the bank can get extremely impacted. Therefore, to deal with such risks banks have come up with a wide variety of measures and prudential norms. For instance, banks always hold a certain amount of funds in reserves to mitigate such risks.
- (2) **Market Risks** : Apart from making loans, banks also hold a significant portion of securities. Some of these securities are held because of the treasury operations of the bank i.e. as a means to park money for short-term with the Central Bank or as a part of adhering to the SLR (Statutory Liquidity Ratio) norm. However, many securities are also held as collateral based on which banks have given loans to their customers. The business of banking is therefore intertwined with the prospects of capital markets.
- Banks face market risks in various forms. For instance, if they are holding a large amount of equity then they are exposed to equity risk (since, the market price of those equities may fall). Again, the banks, by definition, have to hold foreign exchange exposing them to Forex risks.



Similarly, banks lend against commodities like gold, silver and real estate which expose them to commodity risks as well.

In order to be able to mitigate such risks banks simply use hedging contracts. They use financial derivatives available for sale in any financial market. Using contracts like forwards, options and swaps, banks are able to abate ultimate market risks from their balance sheet.

- (3) **Operational Risks** : Banks are often engaged in massive operations in order to become economically viable and profitable. Economies of scale work in favour of larger banks. Hence, it often becomes an extremely difficult task for the bank to maintain consistent and efficient internal operations on such a large scale.

Operational risk occurs as a result of failed business processes in the day to day activities of a bank. Examples of operational risk would include payments credited to the wrong account or executing an incorrect investment while dealing in the capital markets. None of the departments in a bank are immune from operational risks.

Further, these risks may also arise because of having the wrong people or alternatively they could also occur if there is a breakdown of the information technology systems. Any lapse in the internal operational processes being followed by a bank could also lead to catastrophic impacts.

- (4) **Adverse selection & moral hazard** : The financial crisis that occurred during 2007-08 in many European countries and USA has brought the risks of adverse selection and moral hazard to the forefront. These risks arise particularly due to the problem of asymmetric information in the credit market. If the banks invest in risky securities with a hope of getting high returns within a short period of time then they may often fail to select creditworthy borrowers while extending loans (this may be due to inefficient functioning of the credit rating agencies that accentuate the problem of asymmetric information) giving rise to the problem of adverse selection. Further, if these borrowers invest the borrowed amount in some risky assets whose market values have declined then the behaviour of those borrowers cannot be controlled by the lending banks causing a problem of moral hazard. These two problems can substantially reduce the profitability of a bank.

- (5) **Liquidity Risk** : Liquidity risk is another kind of risk that is inherent in the banking business. If the depositors of a bank suddenly want to withdraw money from their account then the bank faces a liquidity risk since the bank will not be able to meet its obligations. This risk is inherent in the fractional reserve banking system. Therefore, in this system, only a percentage of the deposits received are held back as reserves, the rest are used to create loans. Therefore, if all the depositors of any banking institution decide in to withdraw their money all at once (if they have lost faith on that bank, the bank would not have enough money to meet that demand liabilities. This situation is called a bank run. This has happened countless times over the history of modern banking.

However, modern-day banks are not very concerned about this liquidity risk. This is because they have the backing of the central bank with a credit guarantee scheme. In case there is a bank-run on a particular bank, the Central Bank comes forward with its 'bail out schemes' for the rescue of the affected bank. Therefore, the depositors can be paid back when they demand their deposits. This restores depositor's confidence in the banks finances and the run on the bank is averted.

- (6) **Business Risk** : The banking industry today is considerably advanced and diversified. Now-a-days, the banks have a wide variety of strategies from which they have to choose to correct strategy to achieve their goal. Once such strategy is chosen, banks need to invest their resources so as to attain their strategic goals in the long-run.

Hence, there is always a risk that a bank may choose a wrong strategy and face a financial loss. This risk is known as business risk. It is an endogenous risk arising out of the wrong selection of strategy by any bank. As a result of this wrong choice, the bank may suffer huge losses and end up being acquired by some other bank or may simply collapse. It is really difficult for any bank to mitigate the risks that are created by following inappropriate business objectives.

- (7) **Reputational Risk:** Reputation and good will are extremely important intangible assets in banking business. These reputations enable the banks to expand business and generate more profits. Customers always prefer to put their hard earned money at places or banking institutions where they believe follow safe and sound business practices. Hence, if there is any news in the market that projects a given bank with a negative prospect, such news negatively impacts the bank's business. Banks can maintain their reputation by ensuring that they never participate in any unfair or manipulative business practices. Further, the banks need to continuously ensure that their public relations efforts project them as a customer-friendly and honest bank.
- (8) **Systemic Risks or market risks:** The systematic or market risks arise because of the changes in government policies (say, changes in monetary policy of the RBI), inflation in domestic and overseas market, business recession in domestic and overseas market etc. which affect all the banking institutions in a similar fashion. These risks are exogenously given to the banking industry. Hence, it becomes difficult to avoid these risks on the part of any particular bank. However, the risks which arise because of the wrong operation of any particular bank can be regarded as unsystematic risks or diversifiable risks which a particular bank can avoid through proper portfolio management.

● Portfolio management :

The portfolio management by any commercial bank implies how a commercial bank manages its assets and liabilities so as to earn the highest possible profit. This portfolio management hovers around the following four major elements :

- (a) **Liquidity management:** The major concern for any commercial bank is managing the deposit outflows on a day-to-day basis. Thus, a commercial bank should have enough ready cash to meet the demand for cash withdrawals by the account holders. Cash is supposed to be the most liquid asset of any bank. The liquidity of an asset depends on how quickly that asset can be converted into cash involving minimum cost. Thus, a bank must possess adequate liquid assets to meet its obligations to the depositors. This requires proper liquidity management on the part of any commercial bank.
- (b) **Asset management:** Assets of any commercial bank are created through its lending operations. Traditionally the lending policy of any commercial bank was determined by three major principles: safety, liquidity and profitability. In addition, there remain two main approaches to such lending policy of a bank: (i) the 'liquidation approach' or 'real bills' doctrine and (ii) the 'going concern approach'. The 'liquidation approach' emphasizes upon lending against some 'self liquidating' assets such as stocks of commodities or gold. The 'going concern approach', on the other hand, puts greater emphasis upon the future cash flows from the project which is financed through bank loan. However, the asset management policy on the part of any commercial bank suggests that the commercial bank, through its lending policy, should acquire such assets which have lower default risks. This asset management policy helps a bank to minimise its risk and maximise its return from the assets.
- (c) **Liability management:** The liability management policy of a commercial bank implies a practice to be followed by the bank of maintaining a balance between the maturities of their assets and their liabilities in order to maintain liquidity as well as to facilitate lending in prospective fields.



Hence, the liability management policy focuses on acquiring funds at lower costs so as to minimise its liability.

- (d) **Capital adequacy management:** The commercial banks are exposed to different types of risks in their operations, viz., credit risk, interest rate risk, foreign exchange risk, equity price risk, liquidity risk and other operational risks. Hence, the capital adequacy management suggests that the commercial banks should maintain adequate amount of capital (particularly the equity capital) to create a shield against the possible threat of bankruptcy or bank failure under adverse situations.

Now, each component of the portfolio management can be analysed in more detail. Let us first begin with the liquidity management.

Liquidity management: Normally if a commercial bank has sufficient excess reserve, the liquidity management becomes easier. i.e. a deposit outflow in that case does not require major adjustments in its balance sheet. Let us consider a situation where the required reserve ratio is 10% and let us consider the balance sheets of two different commercial banks, say, X-bank and Y-bank where X-bank has excess reserve as shown below :

X-Bank		Y-Bank	
Liabilities (₹ in Crore)	Assets (₹ in Crore)	Liabilities (₹ in Crore)	Assets (₹ in Crore)
Reserves : 40	Deposits : 200	Reserves : 20	Deposits : 200
Loans : 160	Bank capital : 20	Loans : 180	Bank capital : 20
Securities : 20		Securities : 20	
Total : 220	Total : 220	Total : 220	Total : 220

It is observed that while Y-bank maintains 10% of its deposits as reserves (viz. 10% of ₹ 200 crore = ₹ 20 crore), the X-bank maintains an excess reserve of ₹ 20 crore (i.e. ₹ 40 crore - ₹ 20 crore). Now, if we assume a cash withdrawal to the extent of ₹ 20 crore from deposits, and hence, from the reserves, in each of these banks then after such cash withdrawal Y-bank would not have any reserve. Now, to overcome this problem a bank can undertake the following liquidity management procedures :

- (a) The bank can acquire reserves by borrowing from other banks or from corporate houses. However, this procedure involves a cost, viz., the interest (say, the call rate) to be paid by the bank on the borrowed amount.
- (b) The bank can also sell some of its securities to replenish its reserves. In this process also the bank has to incur some costs, viz., the brokerage fees and other transaction costs. However, if the securities have high liquidity then these transaction costs are supposed to be less.
- (c) The commercial bank can also borrow from the Central Bank by discounting some of its approved securities and in this case, the bank rate or the discount rate charged by the Central Bank would be the cost of borrowing this fund.
- (d) The bank can tackle this situation by reducing its loans and depositing the said amount in its reserve. If the bank has a number of short-term loans then it would be easier for the bank to reduce the loan outstanding by calling in the loans, i.e. by not renewing some of its loans. However, the bank may face some problems in following this procedure. In fact, the borrowers may develop a bad impression regarding the behaviour of the bank and they may shift on to some other banks or financial institutions. This would affect the credit-deposit ratio of the bank. The bank can also sell some of its loans to other banks (it amounts to selling its assets to other banks). But the other banks might not be willing to provide full value of the loan.

From this analysis it becomes clear why some commercial banks want to maintain excess reserves. These excess reserves, therefore, can be considered as an insurance against the costs associated with deposit outflows. Thus, the higher are the costs associated with deposit outflows, higher will be the justification for maintaining excess reserves.

Asset management: The asset management strategy of a commercial bank is based on the following three goals:

- To attain highest possible returns on loans and securities.
- To minimise risks, and
- To make adequate provisions for liquidity by holding sufficient amount of liquid assets.

A commercial bank tries to attain these goals in the following ways:

- The banks try to find out creditworthy borrowers while extending loans so as to reduce the chances of default in the repayment of loan amount along with interest by the borrowers. Thus, the banks try to minimise the problem of adverse selection through rigorous screening of loan applications. However, they also give some relaxations for the borrowers with highly prospective investment projects and for the borrowers with good track records.
- The banks also aim at investing in such securities where given the expected returns, risks can become minimum or given the risks, the return can be maximum. This can be achieved through proper diversification of the bank's portfolio, i.e. the bank tries to purchase securities having different risk profiles thereby avoiding a situation of 'putting all the eggs in the same basket'.
- The bank also wants to maintain proper balance between liquidity of its assets and the earnings from such assets. The most liquid asset is cash, i.e. if the bank maintains excess reserves (in cash) then it has to sacrifice the earning opportunities which could have been possible by holding less liquid assets. There is no doubt that any commercial bank wants to maintain excess reserve to avoid the costs of deposit outflow but it can adopt some prudent approach to minimise this cost. The bank can hold some secondary reserves in the form of government Treasury Bills which are almost risk-free but provide assured returns, and the liquidity of the Treasury Bills is more compared to other securities.

Liability management: We know that the liabilities of a commercial bank include depositors' money as well as funds borrowed from other financial institutions. So, the liability management emphasizes on proper maintenance of these funds and creation of a hedge against changes in interest rates to minimise the costs of meeting the obligations. A bank can face a mismatch between its assets and liabilities because of the presence of less liquid assets or due to the changes in interest rates. For instance, during the financial crisis of 2007-08, some of the commercial banks failed to manage their liabilities by relying on short-term debt borrowed from other banks to fund long-maturity mortgages. The liability management reduces the likelihood of such mismatch. A bank must pay interest on deposits and it can charge interest on loan sanctioned by it. The difference between the interest earned on loans and the interest paid on deposits is called as the net interest margin of the bank. The bank tries to track this net interest margin. A fall in this interest margin would mean an increase in the costs of liabilities.

During 1990s, the commercial banks in India began to actively manage assets vs liabilities by issuing negotiable Certificate of Deposits (CDs). These CDs could be sold prior to maturity in secondary market in order to raise additional capital. In 1999, the Reserve Bank of India also advised the commercial banks to address market risks in a structured manner by adopting more comprehensive Asset Liability Management (ALM) system. An ALM Committee is formed in every commercial bank to carry out this process in an effective way.

Capital adequacy management: Normally any commercial bank possesses two types of capital: Tier-I and Tier-II capitals. The Tier-I capital constitutes of equity capital and retained earnings of the



bank. It measures the financial health of a bank. On the other hand, Tier-II capital includes some undisclosed funds, hybrid capital (say, the convertible debentures), the subordinated term debt (where the borrower is expected to repay the borrowed amount after the repayment of all other corporate debts in case of insolvency) etc.

The capital base (particularly the Tier-I capital) of a commercial bank determines the financial strength of the bank and it plays an important role (i) in helping the bank in preventing bank failure, (ii) in determining the return on equity of the bank, and (iii) in complying with the prudential norms of banking regulation (BASEL norms). According to BASEL-III norms, the CRAR (Capital to Risk Weighted Assets Ratio) in terms of Tier-I capital should be at least 10.5%, i.e.

$$\text{Tier-I Capital of the bank} / \text{Total Risk Weighted Assets} = 10.5\%$$
 A bank can maintain it either by raising its capital base or by reducing its investment in risky securities. Further, according to BASEL-III norms, the CRAR (Capital to Risk Weighted Assets Ratio) in terms of Tier-II capital should be at least 2%.

We can show that a low capital base of a commercial bank can lead to higher return on equity (ROE) for the bank where $\text{ROE} = \frac{\text{Net Profit after Taxes}}{\text{Equity Capital}}$. The equity capital holders or the shareholders of the bank are more concerned with ROE. However, the basic measure of profitability of any commercial bank is Return on Assets (ROA) where $\text{ROA} = \frac{\text{Net Profit after Taxes}}{\text{Assets}}$. The relation between ROE and

ROA is determined by the equity multiplier (EM) where $\text{EM} = \frac{\text{Assets}}{\text{Equity Capital}}$.

On the basis of these definitions, we can state:

$$\text{ROE} = \text{ROA} \times \text{EM}$$

$$\text{or, } \frac{\text{Net Profit after Taxes}}{\text{Equity Capital}} = \frac{\text{Net Profit after Taxes}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity Capital}}$$

Thus, given the value of ROA, a low-capital bank will have higher EM and hence higher ROE. But there remains a tradeoff between safety of a bank and the ROE. A low capital base, though raises ROE and satisfies the expectations of the shareholders of the bank, cannot ensure the safety of the bank under odd situations and the chances of bank failure becomes higher for the banks with low capital base. If the bank gives more importance to safety then its ROE will fall. Under uncertain economic situations a bank may follow a portfolio management policy that gives more importance to safety with high capital base. However, the policy will just be the opposite at good times under a favorable economic environment.

1.3.14. Why commercial banks are regarded as special institutions?

In the money market, the privileged role of the commercial banks makes them special institutions in the financial sector of an economy. The unique features of commercial banks put them in a special category of financial institutions.

Firstly, the liabilities of commercial banks are money and the demand deposits (or the chequeable deposits) with the commercial banks constitute an important part of the aggregate money supply in an economy, and thus, the commercial banks participate in the payment mechanism of a country.

Secondly, the commercial banks have also a discount window with the Central Bank of the country, the call money market and the deposit insurance, and this window helps the commercial banks in arranging for their required liquid funds to overcome short and medium-term crisis.

Thirdly, these commercial banks are also a class of financial institutions which the public views as safe and convenient outlets for its savings. The commercial banks can also successfully carry out

efficient mobilisation and allocation of savings in an economy. Hence, in almost all the countries, commercial banks emerged as the dominant class of financial institutions with their crucial role as a repository of public savings and a vehicle of payment mechanism.

Fourthly, credit giving operations of the commercial banks are also considered to be an important driving force for facilitating the growth of small and medium scale entrepreneurs (viz. the MSMEs) in an economy.

Fifthly, the commercial banks, playing a role of financial intermediaries, are supposed to be more efficient in monitoring the debt contracts. If there is a violation of financial covenants on the part of the borrowers, the commercial banks can restructure the terms of contracts to stop this tendency. This flexibility on the part of the commercial banks helps in reducing the costs of financial distress (arising out of such violation of financial covenants). Thus, the loans extended by other financial institutions may not be considered as a perfect substitute of loans provided by the commercial banks.

Sixthly, the economies of scope for the commercial banks arising out of the acceptance of public deposits (in current and demand deposits) and lending operations can provide the commercial banks with an information advantage over other financial institutions. The deposit history of a firm having, say, a current account with any commercial bank may facilitate the bank in understanding the credit risk involved in lending to that firm. Therefore, to minimise this risk the commercial banks can only maintain a 'compensating balance' (i.e. the minimum amount of deposit to be maintained by the borrower with its current or savings account with the bank).

Seventhly, the spread of the branch offices of the commercial banks in every nook and corner of a country can facilitate the process of financial inclusion in any society. If we review the Indian banking system since the nationalisation of commercial banks, we find the wide reach and deep presence of these commercial banks in large and small cities, towns and in large number of villages of our country. It is often said that the diversification and development of Indian economy have been creditworthy particularly due to the active role which the commercial banks have played in financing the productive endeavours in different fields of our economy.

Eighthly, these commercial banks have also been playing a significant role in developing mutual funds, merchant banks, primary dealers (viz. the approved financial institutions involved in purchase and sales of government securities), asset management companies and so on. This apart, through their participation, the commercial banks can influence the growth and liquidity of the debt market. Hence, the breadth and depth of the money market can be expanded through their activities.

Ninthly, in addition to the points already stated, it is worthwhile to mention that the foreign commercial banks in a country (say, in India) play a special role in shaping the policies, perceptions and attitudes of the foreign companies and foreign governments towards the countries where these foreign banks have branch offices. These commercial banks help towards (i) the inflow of foreign direct investment in the developing countries, (ii) the syndication of loan for financing infrastructural projects in developing nations, (iii) the management of issuing foreign currency denominated bonds in developing nations, (iv) the introduction of modern risk management techniques which benefit the customers of these banks in particular and the players of a financial market in general.

Hence, several economists are of the opinion that any reforms in the banking sector should aim not only at profitable banking but also at sound, safe, viable and social banking.

1.3.15. How banks act as a leveraging mechanism

Whenever the assets of a bank exceed its equity base, that bank is considered to be 'leveraged'. The debt-equity ratio in the portfolio of the bank determines its financial leverage.

This leverage of any commercial bank can be estimated in three different ways as shown below :

$$\text{Tier-I leverage ratio} = \frac{\text{Tier-I capital of the commercial bank}}{\text{Total assets of the bank}}$$



$$\text{Debt-equity ratio} = \frac{\text{Total debt capital of the commercial bank}}{\text{Total equity capital of the commercial bank}}$$

$$\text{Debt-capital ratio} = \frac{\text{Total debt capital of the commercial bank}}{\text{Tier-I \& Tier-II capital of the commercial bank}}$$

It is important to note in this connection that Tier-I capital of any commercial bank consists of its equity capital and the reserves and surplus. However, Tier-II capital of any commercial bank consists of hybrid capital (say, the convertible debentures), revaluation reserves (which are created upon the revaluation of an asset), subordinated debt (in the case of a default, creditors owning a subordinated debt will not be paid until the senior bondholders are paid in full) etc. Total assets of any commercial bank includes cash and balances with the Central Bank, balances with other banks, investment in securities, loan and advances, fixed assets and other assets.

Tier-I assets are ones that can be easily liquidated if a bank needs capital in the event of a financial crisis. So, it is basically a ratio to measure a bank's financial health. The higher the Tier-I leverage ratio, the higher the likelihood of the bank withstanding negative shocks to its balance sheet. The denominator in the leverage ratio is a bank's total assets or total exposures, which include its consolidated assets, derivative exposure, and certain off-balance sheet exposures. Basel-III required the banks to include off-balance sheet exposures such as commitments to provide loans to third parties, standby letters of credit, acceptances and trade letters of credit. In 2019, RBI has reduced the leverage ratio from 4.5 per cent to 4 per cent for systemically important banks and 3.5 per cent for other commercial banks, which will help them to increase exposure (Basel-III established a 3 per cent minimum requirement for the leverage ratio while it left open the possibility of making the threshold even higher for certain systemically important financial institutions.)

If the commercial bank borrows more (by issuing, say, certificate of deposits or by discounting the approved securities with the Central Bank or other financial institutions etc.) with the view to enhancing its returns, the leverage of the bank would be higher (i.e. debt-equity ratio will rise or Tier-I capital leverage ratio would fall from the prescribed standard fixed on the basis of Basel norms). The bank expects that by leveraging, the interest paid on the borrowed capital will be smaller than the return generated from the investment of that capital, thus improving the bank's performance. If leveraging mechanism is employed successfully, the difference between the cost of capital and the return on capital employed will contribute to the principal as an economic profit.

When we consider different sources of bank funding, it becomes clear that at least in times of economic growth and prosperity, borrowed assets become cheaper than equity capital and therefore leveraging makes the bank more cost-efficient. However, large-scale lending without appropriate analysis of borrowers' risk profiles and without assessing a bank's exposures can create a trouble for the bank. This is why banks' debt level calibration is a delicate balance between risk-taking and profitability on the one hand, and safety and soundness on the other.

The relationship between borrowed funds, clients' deposits, and own funds must be managed in such a way that the commercial banks remain solvent at all times, and that a sufficient buffer is available to cover unforeseen costs or defaults. This buffer is, in part, determined by the bank's level of leverage. However, some critics have drawn attention to the fact that assets differ in their ability to absorb losses and that the leverage ratio is, therefore, not sufficient for determining the risk assumed by the bank. The business model, i.e. the main activities of the bank, the types of assets it holds, and the level of operating leverage (i.e. how far the additional earning of the bank is sufficient to cover the additional cost of borrowing) are other important factors to consider while evaluating a bank's ability to steer clear of insolvency when markets are volatile.

The primary role of banks in the economy is that of financial intermediation between lenders and borrowers : banks allocate depositors and investors' capital to sectors of the economy in which the



risk-return profile appears to be the most attractive. The expertise of the commercial banks in evaluating risk profiles and expected returns from the capital invested contributes to mitigating problems of inefficient capital allocation. Furthermore, since on the one hand, depositors often demand products and services that offer high levels of liquidity (such as demand deposits or short-term time deposits) and on the other, borrowers need stability and seek credit with longer maturities in their contracts, there is obviously an inherent maturity mismatch in the asset-liability position of the commercial banks. However, by building up large pools of deposits and thereby reducing the risk for asset movements in total deposit balances, banks can efficiently transform the maturity of capital by transforming the deposit liabilities of short-run maturities can be efficiently transformed into assets with longer maturities and can maintain sustainable financing along with a high level of liquidity. Hence, commercial banks can serve as an important facilitator for efficient capital allocation in an economy. We have already seen that risk management activity of any commercial bank is closely linked to the bank's role as a financial intermediary. Banks want to minimise the risks involved in its credit giving operations by conducting an appropriate screening and evaluation of creditworthiness of its borrowers, and by (re)distributing or pooling the risks through the use of financial instruments. When a bank opts for loan syndication then it implies a risk-spreading or risk-distributing endeavour, whereas extending credit facilities to borrowers with different risk profiles would imply risk pooling.

Commercial banks make a profit on the interest earned on its borrowed funds through lending spread (i.e. the difference in the interest rate charged on the loan amount and the interest rate to be paid on the borrowed amount of the bank), and on commissions charged for services. However, to amplify its income and capacity to lend, it can also choose to leverage, i.e. borrow more money on its own account (e.g. from governments or other financial institutions) and then lend it to other clients at a higher interest rate. It not only enhances profitability but also creates a source of additional volatility of income of the commercial banks.

Moreover, if there is a nominal fall in the underlying asset value (say, in case of mortgage-based loans), this causes a direct increase in the loan value relative to the asset value since loans extended by the bank to its client are constant and quoted in nominal terms. This means that the debt ratio is contingent upon the underlying asset values. When prices of the mortgaged assets fall, the borrower faces problems to service his/her debt, since the value that would be realised through liquidation of the assets would no longer match the original amount extended by the bank as a loan. The second consequence of a fall in asset values is a decline in the perceived financial standing of the borrower. When the market value of the borrower drops, creditors (viz. the banks) demand higher lending rates, and the indebted borrower might find it hard to deliver profits. This can quickly become a downward spiral in which the anticipation of insolvency or delinquency may actually force that borrower out of business. The outbreak of global financial crisis during 2008-2009 was particularly an outcome of such excess leveraging of the banks in USA and Europe.

On the benefit side, leverage enables higher economic growth by relocating idle or unproductive capital to growth prospects. Leverage is supposed to be the key element for growth of a banking institution as well as the economy as a whole.

The commercial banks in India play an important role in funding the real sector, since almost 75% to 85% of financial intermediation is serviced by the commercial banks in India, as opposed to, for example, the United States, where only a third of all financial intermediation is conducted by banks. In India, the commercial banks are particularly important for MSMEs who lack the knowledge and size to participate in capital markets, and therefore the debt financing of the MSMEs supported by the commercial banks has a strong bearing on the macroeconomic development. The funding is partly carried out by issuing loans or lines of credit to enterprises. This supports the notion that leveraged



financing of business in India facilitates higher employment levels, contributes to economic activity, and improves the business competitiveness.

However, excessive leverage carries a threat of the amplification effect of the volatility of returns, i.e. not only the absolute increase in value of returns is accelerated with the leverage, but the chances of making loss are also accelerated. When interest and principal payments cannot be serviced, the debt levels increase, causing the enterprise, or sometimes the entire economy, to fall further down the debt spiral. Leverage makes the economy more dependent on funding, and, therefore, more volatile and sensitive to unforeseen shocks in capital markets.

Increasingly, one of the broadly agreed policy stances among the policy makers is that banks should be legally obliged to comply with a pre-defined leverage ratio standard. However, such a policy measure would address debt levels alone, and not the use to which the borrowed money is put. As long as the money is optimally allocated in economic terms, high leverage levels do not necessarily imply higher risk. It is only when the creditworthiness of the borrower or the return of the underlying asset becomes more uncertain that high leverage will increase the risk profile of the bank. Disregarding this aspect would not only constitute a failure in reaching the intended goal of introducing a leverage ratio, it could also impose undue constraints on lending and slow down the economic recovery.

From theoretical view point, the debt levels of the commercial banks should be balanced so that costs of debt and benefits arising out of such debt are in perfect equilibrium. Only then the leveraging mechanism cannot lead to any crisis. As easy as this may sound, it is virtually impossible to determine accurately the optimal level of leverage.

Academic studies confirm that the financial crisis arising out of excess leveraging of the commercial banks is often followed by a period of debt reduction or a process of 'deleveraging'. In the recent past, however, periods of serial defaults have become much shorter and more frequent. This might probably be a result of improved resolution mechanisms on the one hand and a faster post-crisis 'releveraging' on the other. This apart, data dissemination has improved over time, making failures more easily detectable.

Now, the question is: Can the fixation of a standard leverage ratio for the commercial help the banking sector to attain an ideal situation? Having no practical guidance at hand for the optimal debt levels, the global standard setters arrived at an agreement on the maximum debt levels a bank may run. More specifically, in the wake of current regulatory reforms which aimed at enhancement of the banking sector's resilience, the Basel Committee introduced a leverage ratio as a supplementary measure to the risk-based ratio of Basel-II, with the view of setting it at 3% and making it a Pillar-I measure in 2019. With this ratio, the Basel Committee aims to constrain the build-up of leverage in the banking sector, and reinforce the risk-based requirements with a non-risk-based 'backstop' measure, based on gross exposure. The proposed ratio would also take into account the off-balance sheet items, thus aiming to embrace as many bank exposures as possible. While the reasoning behind this proposal is clear and just, it must be kept in mind that accounting for the off-balance sheet items is no straightforward matter. Hence, at this point in time, implementing the measure coherently remains a challenge.

Seen from a broader economic perspective, determining the policy-mandated levels of leverage is a trade-off between the risk of reduced earnings due, reduced lending and investing, and the risk arising out of the volatility of returns under an over-abundance of credit implying excess leverage with the banking system. When too much credit is made available, the risk for efficiency loss increases. On the other hand, credit shortages and 'deleveraging' can hinder the economy from achieving its full potential. If the flow of bank credit declines to the private sector, projects with even good prospects would suffer.

From the above discussion, it becomes clear that economic growth of a country depends to a great extent upon the leveraging mechanism followed by the commercial banks.

1.3.16. Determination of Bank Leverage and Macroeconomic Theory

Like any non-bank commercial enterprise, banks can also go for leverage in as much it has a profit making motive to operate with. Thus, there is a need to examine the factors responsible for bank leverage. High leverage of financial firm may prove to be deleterious for the financial stability and this calls for regulating the extent of leverage for financial firms in general and banks in particular for ensuring the health of financial sector and preserve its capacity to support economic growth. Now, bank leverage and its macroeconomic implications, we modify the IS-LM model by explicitly considering the bond market in replacement of money market. This makes sense in the light of the modern economic system wherein interest rate is a multifarious entity in as much as it relates to both consumer credit market (loan market) and auction credit market (bond market).

Now the modified IS-LM model should rather be called as IS-BB- $L_B L_B$ model (closed economy) [where B stands for bond market and L_B stands for bank leverage] which however retains the treatment of real sector as done in the conventional IS-LM model, except for the context of speculative money holding and the way money market has been shown as key to interest rate determination. It is so because people hold their savings in form of bank deposits instead of money other than transaction balance. They draw the required liquidity from current flow of income or resort to borrowing from banks to meet their liquidity needs. In this particular model, private firms finance their capital requirements by borrowing from banks and issuing bonds in which banks invest to meet their liquidity. Let us now see the framework of IS-BB model as follows:

Real Sector:

Real sector deals with goods market where the equilibrium aggregate output (Y) is determined from the following equation:

$$Y = c(1-t)Y + C\left(i^e, \frac{M}{P}\right) + I(i_B, e) + tY + d\left(\frac{H}{P}\right) \quad (1)$$

Let us now explain the above equation. The right-hand side reveals planned aggregate demand comprising of private final consumption expenditure, private investment and government spending. Consumption depends on disposable income $(1-t)Y$ where t denotes the tax rate as under the proportional tax system. It is to be noted that income induced consumption is associated with propensity to consume, denoted by c . It is to be noted that the average propensity to consume out of the current disposable income is assumed to be constant and is given by c . Let it be mentioned in this regard that the commodity credit market is imperfectly competitive (particularly due to asymmetric information problem and oligopolistic structure, per se) and this results in interest rate on commodity credit to be rigid.

Consumption is also financed by bank credit that depends on fixed interest rate as decided by banks (i^e) and real wealth of the borrower $\left(\frac{M}{P}\right)$. Investment depends on the interest rate on bonds

i_B and an expected profit (e) of the investor and it is flexible in nature. Moreover, I denotes the component of aggregate private investment financed by investment of profit. Government spending is partly financed by tax proceeds (tY) and partly by borrowing from Central Bank as denoted by change in monetary base or high-powered money $d\left(\frac{H}{P}\right)$.

We shall now look into the relation between Y and i_B when goods market is in equilibrium. An increase in interest rate on bonds dampens the investment demand. This results in contraction of



aggregate demand and given the aggregate supply, leads to excess supply in goods market. Since supply is demand determined, excess supply prompts the firm to cut back on the level of planned output until the excess supply is cleared off. This explains for equilibrium in goods market, i.e., an increase in interest rate is associated with fall in Y and vice versa. Thus likewise the conventional model herein, the IS curve is downward sloping.

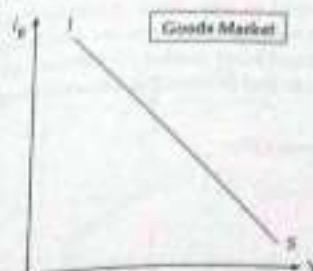


Fig-1.4

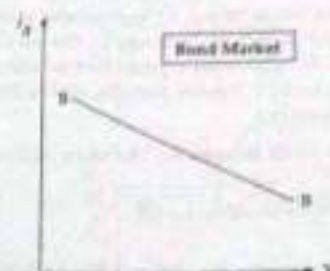


Fig-1.5

In Fig-1.4, the downward sloping IS curve reflects the inverse relation between Y and interest on bonds (i_B) implying an increase in interest rate on bonds is associated with a fall in Y .

Bond Market:

In the bond market, private firms are the sellers of bonds and banks are buyers of bonds. Now the allocation of banks' portfolio between commodity market credit (credit extended for financing consumption) and auction market credit (i.e., the bond market) depends on the interest rate on bonds traded in auction credit market, default rate on commodity market credit (say, denoted by ϕ) and net worth of the firms (say, denoted by γ). To this end, we assume that β is the fraction of liquidity that banks decide to hold in commodity market credit which varies inversely as ϕ and i_B as well as γ . That is to say, the fraction of liquidity that banks decide to hold in commodity market credit will fall if (i) default rate on commodity market credit rises, (ii) interest rate on bonds in which the banks invest rises and (iii) net worth of the firms which want to borrow from the bank, rises. That is to say, an increase in default rate, ceteris paribus, would escalate the risk perception of the banks with regard to investing in commodity credit market and thereof, the supply of loans geared at financing consumption will fall and demand for bonds will rise. However, the importance of bond market interest rate in the determination of optimal portfolio allocation by banks rests significantly on the differential in liquidity risk between commodity credit market and bond market. Thus, we have the bond market equilibrium condition as indicated by the following equation:

$$(1-\beta)(1-r)(1-c)(1-t)Y = I(i_B, e) \quad (2)$$

Here, r denotes the required reserve ratio to be maintained by the commercial banks with the Central Bank. The left-hand side of equation (2) signifies the amount of liquidity that the banks are willing to use for lending to the firms by buying bonds issued by them. The right-hand side signifies the supply of new bonds issued by the firms for financing their capital requirements.

The relationship between Y and i_B in bond market remains inverse in nature for maintaining equilibrium in bonds market. This is so because for ceteris paribus increase in Y , savings increase [here savings is denoted by $(1-c)(1-t)Y$] to result in increased supply of new deposit with bank and that leads to proportionate increase in portfolio allocation towards bonds. This creates excess

demand in bond market. To clear off this excess demand bond price rise and interest rate fall. Thus we get a downward sloping BB curve showing different combinations of Y and i_b which maintain equilibrium in bond market (Fig-1.5). In Fig-1.5, an increase in Y is associated with an increase in bond price and consequently, a fall in interest rate on bonds.

Now, we can show the simultaneous equilibrium in the goods market and bond market and the equilibrium value of (i_b, Y) that would maintain equilibrium in both these markets. This would show that bank leverage or the borrowing of the banks from the market would arise as a residual of simultaneous equilibrium in both goods market and bond market (given the equilibrium value of i_b and Y). For the stability of this model, we assume that IS schedule remains unchanged when the BB schedule.

The Slope of IS Schedule : The slope of IS schedule is given by

$$\frac{dY}{di_b} = \frac{1 - [c(1-t) + t]}{I_1} < 0 \quad (3)$$

Let us now explain the slope of IS schedule. Following unitary increase in interest rate on bonds, cost of financing investment will rise and, therefore, the investment demand will contract by $(-I_1)$. This creates an excess supply in goods market and to clear that excess supply, aggregate output (Y) falls. A fall in Y by one unit, leads to a fall in excess supply fall by one unit. But consumption expenditure contracts by $c(1-t)$ units and so does tax financed government expenditure by t units. Thus, net fall in excess supply is given by $1 - [c(1-t) + t]$ units. Thus, following unitary rise in

interest rate on bonds, Y declines by $\left(\frac{-I_1}{1 - [c(1-t) + t]}\right)$ which is the reciprocal of the absolute slope of IS schedule.

The Slope of BB Schedule : The slope of the BB schedule is given by :

$$\frac{dY}{di_b} = \frac{(1-\beta)(1-c)(1-t) - c(1-t)}{I_1 + \beta_{BB}(1-c)(1-t)Y} < 0 \quad (4)$$

Let us explain the slope of the BB schedule. Following the unitary increase in Y , ceteris paribus, savings rise by $(1-c)(1-t)$ units and thereupon the supply of liquidity goes up, so does amount of it invested in bonds by $(1-\beta)(1-c)(1-t)$ units. This drives up the bond price arising out of it excess demand for bonds and results in a fall in interest rate. Following unitary increase in bond price, excess demand for bond falls by $[-\beta_{BB}(1-c)(1-t)Y]$ units. However, investment picks up by $(-I_1)$, and therefore, net fall in excess demand in bond market is $[(1-\beta_{BB}(1-c)(1-t)Y) + (-I_1)]$ units. Hence, after an increase in Y , interest rate declines by

$$\left[\frac{(1-\beta)(1-c)(1-t) - c(1-t)}{I_1 + \beta_{BB}(1-c)(1-t)Y} \right] \text{ units.}$$

In Fig-1.6, the upper panel reflects on the equilibrium in the goods market and bond market, and thereof it determines equilibrium Y and interest rate on bonds. The lower panel exhibits the amount of leverage that bank will keep, given the equilibrium Y and i_b . Hence, it stands out that the equilibrium amount of leverage owed by banks (B_L^e) is derived from equilibrium aggregate

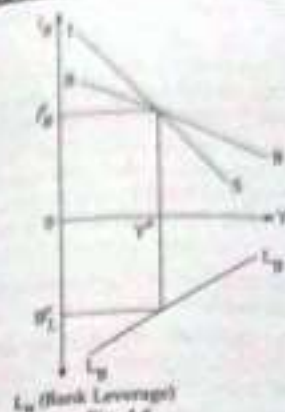


Fig-1.6

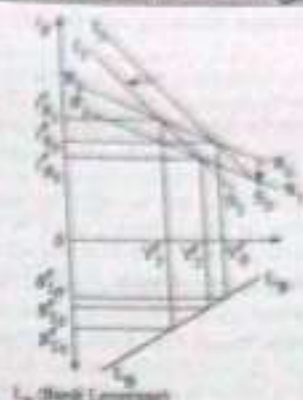


Fig-1.7

output (Y^*) and equilibrium interest rate (i_b^*) in bond market and thereof can be treated as a macroeconomic phenomenon. Moreover, given the equilibrium aggregate output and interest rate on bonds are sensitive to tax rate, commodity market interest rate, money supply, price level, profit expectations, default rate, net worth of private firms and reserve requirement, the degree of bank leverage has significant association with the solvency of households and firms, uncertainty perception about future state of economy for future profit expectations by the firms, fiscal policy and monetary policy of the government.

In extension of the previous analysis, let us now examine the implication of forecast about future recession that will prompt private firms to cut back their profit expectations. This will manifest reduced investment (a fall in I) and a reduced demand for goods, and finally a reduced aggregate production. This is what is essentially suggested by the leftward shift of the modified IS curve in Fig-1.7 from I_0S_0 to I_1S_1 . Hence, there will be a fall in equilibrium Y and this leads to a fall in aggregate saving and thereof, a decline in the supply of liquidity prompting an escalation of bank leverage. This negative effect gets furthered with fall in credit financed consumption owing to diversion of investment by banks from commodity credit to bond market following a rise interest rate on bonds, notwithstanding a rise in bond-financed investment.

However, if the reduced investment is channelized through reduced bond issuance [through a fall in $(B_b \pm)$], then the supply of bonds will fall and this, given the demand for bonds, there will happen a fall in interest rate [as illustrated by a downward shift in BB schedule from BB_0 to BB_1 in Fig-1.7]. This will induce a diversion of portfolio choice of bank away from private investment towards consumption. However, increased risk perception on the part of the banks will impede this credit diversion towards consumption credit. The reasons are that with the continuance of economic recession there will arise higher chances of (i) job-loss and (ii) pay-cuts, and this, in turn, will adversely affect the solvency of the households and they will be more prone to defaulting in bank loans (consumption credit). As a result, credit financed consumption will take downside magnifying the demand deficiency and thereof, a larger negative effect on aggregate output, income and bank leverage through reduced aggregate savings. Now, the banks, in view of the increased danger of bank leverage at the time of economic recession, may adopt such a portfolio management that would reduce their leverage level at each level of Y , and as result the L_b schedule would shift downward to the left.

1.4. Indian banking system and its structure

Briefly, a bank is a business firm whose main function is to give and accept credit. In addition, it has some subsidiary functions. The Indian Banking Regulation Act (1949) defines the activity of a bank as "accepting for the purpose of lending or investing of deposits of money from the public repayable on demand or otherwise, and withdrawable by cheque, draft, order or otherwise".

Now-a-days, banks work under various Governmental restrictions. In our country, the banking companies function under the control of the Central Bank or the Government. There are restrictions on the rates of interest at which the banks can lend or borrow. Besides, banks must be joint stock companies. In India, there cannot be proprietorship or partnership firms. Moreover, a bank is nationalised as soon as its total deposits exceed a certain limit.

• Different types of bank

The principal types of banks in countries like India are described below :

(1) **Central Bank** : In all countries there is a special bank that looks after the working of other banks. All other banks carry on their business within the restrictions imposed by this bank. This bank is called the *Central Bank*. In India the Reserve Bank of India is the Central Bank. It was established in 1935. At first, however, it was not fully under Government control. It was nationalised in 1949.

(2) **Commercial banks** : The firms that we usually refer to as 'banks' are called *commercial banks*. Their main function is to accept deposits from the public and lend money to business firms. The largest commercial bank in India is the State Bank of India.

A commercial bank must have the following three basic features which distinguish them from any non-banking financial institution :

- A commercial bank accepts deposits from the public. These deposits can be withdrawn by the depositors on demand by drawing cheques on those deposits.
- A commercial bank uses the deposit money for lending to different business institutions or individuals.
- Commercial banks can 'create' money through their lending operations. This is called *deposit money* or *credit money*.

Any financial institution which may accept public deposits and engage in lending operations, but cannot create credit money (like the Life Insurance Corporation of India), should not be treated as commercial banks. They are regarded as non-banking financial intermediaries.

- (3) **Development banks** : There are some banks which do not carry on their activities along commercial lines. Their main job is to assist in the country's economic development. For this purpose they grant long-term loans to new industries at relatively low interest rates. [e.g. Small Industries Development Bank of India (SIDBI), Industrial Investment Bank of India (IIBI), etc.]
- (4) **Co-operative banks** : These banks are run on a co-operative basis. These banks were originally created for the purpose of giving easy credit to the farmers. But for various reasons such banks in India have not been able to play a proper role. Co-operative banks have now been established in the urban sector also.
- (5) **Land mortgage banks** : These banks have been established with a view to helping farmers in matters related to land. The functions of these banks is to grant long-term loans to farmers at low rates for the purposes of buying new land, making improvements on lands already in use, repayment of old loans that may have been taken in the past in connection with purchase of land, etc. However, in order to get this assistance, the farmers have to mortgage their land to the



banks. At present, these banks are called the State Co-operative Agriculture and Rural Development Banks.

- (a) **Exchange banks** : These banks were established with a view to giving loans to people engaged in foreign trade. But later on they extended their activities in other fields. In India, most of the exchange banks were established with foreign capital and since now there is substantial foreign control on them.
- (b) **Universal Banker** : The banks which provide short-term loans like commercial banks as well as long-term loans like any development bank, are called the *Universal Banks*. The UCB Bank is the first Universal Bank of India (The UCB was merged with UCB Bank in 2020).

• Indian banking system :

In Indian banking system, the banking institutions are classified into two categories : (a) scheduled banks, and (b) non-scheduled banks.

The scheduled banks are required to be registered with the Reserve Bank of India (viz., the Central Bank of India). The scheduled banks are guided by the rules and regulations framed by the RBI. The structure of the Indian banking system is shown with the help of a flow chart (Chart-2).

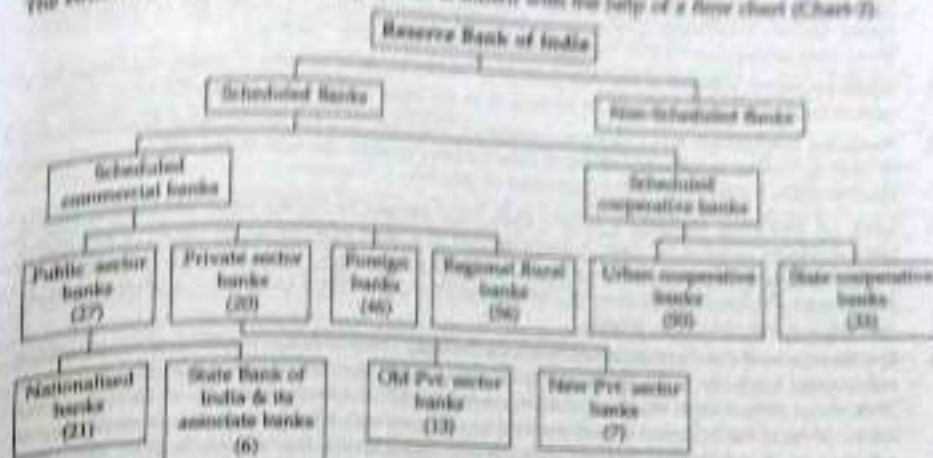


Chart-2

Source : Report on Trend & Progress of Banking in India (RBI), 2018.

• Example :

- (a) **Nationalised banks** : Bank of India, United Bank of India, Allahabad Bank, Bank of Baroda, Dena Bank, IDBI Bank, Bharatiya Mahila Bank, etc.

■ **Note** : On 17 September, 2018, three nationalised commercial banks, viz., Dena Bank, Bank of Baroda and Vijaya Bank have been merged based on a government decision. The objective was to strengthen their capital base, and to reduce the burden of their non-performing assets. The recent change in Indian banking structure (since 2020) has been discussed in Subsection 1.5.8.

- (b) **SBI & its associates** : State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala, State Bank of Travancore.



- (c) Old private sector banks : South Indian Bank Ltd., Federal Bank Ltd., Karur Vysya Bank Ltd., etc.
- (d) New private sector banks : Axis Bank, Yes Bank, Kotak Mahindra Bank, Bandhan Bank, etc.
- (e) Foreign banks : Hongkong & Shanghai Banking Corporation (HSBC), Citibank, American Express, etc.
- (f) Regional rural banks : Paschim Banga Gramin Bank, Uttarbanga Kshetriya Gramin Bank, Odisha Gramin Bank, Tripura Gramin Bank, etc.

1.4.1. Features of Indian banking system

Important features of Indian Banking System are discussed below :

1. **Nationalised Central Bank** : The Reserve Bank of India is the Central Bank of India. It is the apex body in the Indian banking system. In 1948, it was nationalised by the government of India.
2. **Existence of deposit Insurance Corporation** : It is a specialised organisation set up by the Government of India in 1962, in order to provide safety to the deposit holders against the banks' failure. It provides insurance on banking deposits upto ₹ 1,00,000 per account holder. Every commercial bank takes the deposit insurance from this institution.
3. **Apex regulatory body** : Like every country Indian banking system is closely regulated by a central bank. The Reserve Bank of India acts as the apex body in the Indian banking system.
4. **Banking Regulation Act** : The government of India had enacted the Banking Regulation Act in 1949 for better regulations of the Indian banking system. All scheduled commercial banks have to abide by the rules and regulations of this Act.
5. **Lack of banking inclusion** : More than forty percent of Indian adult population do not have any bank account till date. A major section of India's population do not have any access to the banking facilities. Rural people do not get the banking services adequately. So, the rural India bears the brunt of lacunae of banking services. Situations have been improving slowly but still it is not out of the woods.
6. **Expansion and concentration of bank branches** : The number of branches of the scheduled commercial banks in India increased from about 8,045 in 1969 to about 1,31,750 in 2015. In 2015, about 67% of these bank branches belonged to SBI (and its associates) and the nationalised banks. Most of the branches of nationalised and private sector banks in India are established in urban areas. Rural people confront with various problems for this reason. In 2015, about 63% of bank branches were located in urban areas.
7. **Existence of Public Sector and Private Sector Banks** : In our country both public sector as well as private sector banks provide the banking services parallelly to the people of India.
8. **Efficient and safer means of payments** : RBI has introduced the following to make the payments mechanism safe and efficient :
 - (i) The system of Magnetic Ink Character Recognition (MICR) Cheques for preventing the fake cheques ;
 - (ii) RBI has also introduced Cheque Truncation System (CTS).
9. **Use of Technology** : Indian banking institutions have been using modern technologies in banking transactions for rendering better services to their customers. Presently most of the Indian banks have installed the core banking system (CBS) by using modern technologies.
10. **Strict Control** : Indian banking structure is very sound and it is strictly controlled by the banking sector apex body, viz., the RBI.



11. **Stressed Assets or Non-Performing Assets (NPAs)** : Indian banking sector witnesses a gradual increase of banks' bad assets or Non-Performing Assets (NPAs) or banks' stressed assets. It is a perennial problem of India banking sector. The key parameter to judge the health of the banking system is the level of its stressed assets. With falling profits or earnings of the corporate sector, and with growing number of unemployed people or people who have lost their jobs in a slowing economy, bank's NPAs are gradually increasing. A rise in NPAs is corrosive for the financial health of banks as they do not earn anything on such assets. Moreover, banks need to set aside a portion of their earnings to provide for their stressed assets.
12. **Asset Reconstruction Companies (ARCs)** : Assets Reconstruction Companies (ARCs) in India, through a trust, buy stressed assets, i.e., NPAs of banks and other financial institutions at a discount for the recovery of the affected companies. In India, ARCs collectively have been managing assets of more than ₹ 25,000 crore bought from banks. Recently the State Bank of India (SBI) has sold ₹ 4,500 crore of its bad assets to some ARCs.
13. **High Transaction Costs** : Indian banking system suffers from high transaction costs due to overstaffing, poor utilisation of resources, NPAs, etc. The biggest challenge before the Indian banks is to reduce the transaction costs for small loans and deposits. So, small-sized banks need to be merged among themselves in order to attain economies of scale.
14. **Liquidity Crisis** : Indian banking system sometimes suffers from liquidity crunch. It leads to hobble economic activities in the country.

1.4.2. Weakness of Indian Banking System

Indian economy has been suffering from lacunae of banking services particularly in rural areas. There has been a problem of inadequacy of basic financial services in rural areas. This has been considered as structural bottleneck that the Indian financial system faces. Still a large part of Indian population is not under the ambit of banking services. Indian banking branches are mostly concentrated in urban areas and rural India has been bearing the brunt of non-availability of basic banking services. Mostly rural people do not get the gamut of banking services due to lopsided growth of bank branches. As a result, rural people have to resort to unauthorised saving schemes such as Collective Investment Schemes (CIS) run by unscrupulous operators with unholy motives and ultimately, the small savers are cheated. This is the crisis in the system. Due to lack of availability of banking facilities, savings of the rural people do not get channelised in the right manner. So, it deters capital formation in the system. India is having a tremendous potential to grow economically at a much higher pace and to tame the unemployment rate. But due to slackening of these basic financial services in rural areas, the Indian financial system has been suffering.

The perennial problem of Indian banking industry is its stressed assets, that is, Non-Performing Assets. The key parameter to judge the financial health of the banking system is the level of its stressed assets. The stressed assets of banks or NPAs have been increasing gradually. A rise in NPAs is corrosive for the financial health of banks as they do not earn anything on such assets. Moreover banks need to set aside a portion of their earnings to provide for stressed assets.

The transaction costs of public sector banks particularly for small loans and deposits are too high. High operational cost of public sector banks reduces the profitability of banks. It is a great challenge before the Indian PSU banks to reduce the transaction costs.

Top level officials of the Public Sector Undertaking banks (PSU banks) are susceptible to the undue pressure for sanctioning loans by the politicians and bureaucrats to the individuals and entrepreneurs who do not satisfy the requisite norms. As a result, the non-performing assets (NPAs) of PSU banks are increasing day by day.

Another problem faced by the Indian banking industry is the existence of Shadow banking. It refers to a 'bank-like' activity outside the banking system. The Financial Stability Board (FSB)

which coordinates among financial authorities at the international level, defines shadow banking as "credit intermediation involving entities outside the regular banking system." In India, the banking system is not adequately spread. As a result, some unauthorised and unregulated institutions emerged in the financial system. However, some institutions in India, such as, banking financial institutions are part of shadow banking.

1.4.3. RBI : Its Origin

The Reserve Bank of India (RBI) is India's central bank. It is the apex bank in the Indian banking system. The RBI was established in 1934, through the Reserve Bank of India Act, 1934. It started operations on 1 April, 1935. In 1949, it was nationalised by the government of India and since then it is fully owned by the government of India.

The preamble of the Reserve Bank of India Act states that "whereas it is expedient to constitute a Reserve Bank for India to regulate the issue of bank notes and the keeping of reserve with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage..."

So, from the above it can be said that the main objectives of formation of the RBI are :

- Securing monetary stability in the country, and
- operating the currency and credit system for the benefit of the country.

● Objectives of Formation of the RBI :

Objectives of formation of the RBI may be enumerated as follows :

- 1. Securing monetary stability :** Economic stability of a country largely depends on the monetary stability of that country. If the value of currency fluctuates widely, the economy of that country suffers. So, it is necessary to bring monetary stability in the country. RBI is the apex body and the regulator of money supply in the economy. It monitors the money supply in the country. So, in order to maintain the monetary stability in the country, the RBI was established.
- 2. Operating the currency and credit system :** A stable currency rate of a country is supposed to be most important for the international trade. If the exchange rate of the currency of a country remains too volatile, international trade is affected and the economy suffers. Again, total money supply in the country also plays an important role for stimulating the country's business activities. So, it is very important to bring the stability in the foreign exchange rate and strengthen the credit system of the country. The RBI was formed as the main regulator of India's money market and was assigned enormous powers to regulate the foreign exchange rate of the domestic currency and the overall credit system in the country.
- 3. Strengthening the country's banking system :** Economic growth and prosperity of a country largely depend on the effectiveness of country's banking system. Banking system is the nerve centre of an economy. It plays the key role in the economic development of the country. So, in order to strengthen the country's banking system, the RBI was established. It has been given enormous powers to act as the watchdog of the India's money market.
- 4. Expanding the banking operations :** Indian banking system remained fragmented for a long time and a lopsided growth was witnessed. Rural India lacks the banking system. Most of the banks are established in urban areas. Rural people do not get adequate banking services. It affects the mobilisation of savings and hinders the process of the capital formation in the country. So, in order to expand the banking business, particularly in rural India, the RBI was established.
- 5. Strengthening the money market :** Money market provides working capital loans to business organisations. If the money market of a country is developed, it provides sufficient



amount of short-term funds to the industries as and when required. It smoothens the business operations in the country and the economy as a whole prospers in the longer term. India's money market remained dull at the time of independence. So, in order to bolster up the inner strength of the money market, the RBI was established and was entrusted with enormous powers and responsibilities to make a steady progress of the money market.

- 6. Bringing economic stability :** Bringing economic stability, that is, maintaining the overall economic growth in a balanced manner is not an easy task. The government alone cannot do that. The RBI was established and entrusted with enormous powers to bring the economic stability in the country.

1.4.4. Organisation, Role and Functions of RBI as the Central Bank

The money market in any country is controlled by the Central Bank of that country. In India, RBI is the Central Bank. The Reserve Bank of India (RBI) is managed by the central board of directors and four local boards of directors. The central board comprises of official and non-official directors. The central government appoints all the directors of the central board for a period of four years. The governor and a maximum of four deputy governors are the full time official directors. There are fifteen non-official directors. Ten non-official directors are appointed from various fields, one director is appointed by the government and the remaining four directors are appointed by the four local boards. The central board takes the charge of superintendence and directs the bank's activities. There are four local boards situated in four metro cities [in Mumbai, Kolkata, Chennai and New Delhi]. Each local board consists of five members. The members are appointed for a maximum period of four years by the central government. The local boards render advice to the central board on various matters.

● Functions of RBI :

According to Samuelson "A central bank is a bank of bankers. Its duty is to control the monetary base and control of this higher powered money to control the community's supply of money".

According to Sayers : "The central bank is the organ of government that undertakes the major financial institutions so as to support the economic policy of the government."

In every country, there exists a central bank to regulate and control the entire banking system.

The Reserve Bank of India (RBI) is the central bank of India. RBI is the apex regulatory body of the entire money market. The RBI performs multifarious functions in the Indian financial markets. The main functions of the RBI are discussed below :

- 1. Issue of bank notes :** The Reserve Bank of India Act, 1934 entrusts the monopoly power to issue currency notes (except one rupee note and currency coins) to the Reserve Bank of India. The RBI maintains a separate note issue department which is known as "Issue Department". One rupee note and metal coins are issued by the Ministry of Finance of the central government but these are circulated by the RBI. The Reserve Bank of India does not issue the currency notes arbitrarily. It issues notes against the security of assets, such as gold, bullion, foreign currencies, government securities, bills of exchanges etc. Under the original Act, a proportional reserve system was followed for issuing currency notes. According to this system, a reserve of gold and foreign securities in proportion to the value of issued currency notes had to be maintained with the RBI. But the supply of gold could not keep pace with the growing demand for currency notes. So, after 1956, a fixed minimum reserve system was introduced. According to this system, RBI can print any volume of currency notes by keeping a gold reserve worth ₹ 115 crore and foreign exchange worth ₹ 85 crore.
- 2. Banker, fiscal agent and adviser to the Government :** Central bank acts as banker, fiscal agent and adviser to the government. It acts as the banker of all state governments and the central government. The Reserve Bank of India receives the deposits of cash, cheques, draft



etc., from the government. It takes the responsibility for disbursing various payments of state government and the central government. It also provides short-term loans to state governments and the central government and buy and sells foreign currencies on behalf of the government. As a fiscal agent, it takes the charge of managing the public debt. It issues loans on behalf of the government, receives subscriptions of these loans, pays interest on them and finally repays these loans. It controls the government's foreign exchange position.

The Reserve Bank of India also acts as the financial adviser to the government. It advises the government in financial matters at the time of formulating the economic policies, deficit financing, foreign trade policy, budgetary policy, etc. As it renders such multifarious services to the government, it is said that RBI is the government's bank.

3. **Banker to the banks :** The RBI acts as the banker of all the scheduled commercial and cooperative banks. As the banker's bank, the RBI performs many functions. It acts as the custodian of cash reserves of commercial and cooperative banks. RBI provides credit to the banks by discounting bills of commercial banks. It regulates the activities of banks. RBI provides advisory services regarding buying and selling of various securities. All scheduled commercial banks have to keep a minimum amount of cash as Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR). For maintaining 'SLR', cash and other assets, such as gold, bullion, government securities can be kept with the RBI. When the commercial banks and cooperative banks face liquidity crunch, RBI provides short-term loans to such banks by taking some assets as mortgage. That is why the RBI is called as the lender of the last resort.

4. **Custodian of foreign exchange reserve :** RBI always strives to maintain the stability of external value of the country's currency. It performs the custodial function in respect of foreign exchange. In this regard RBI performs the following functions :

- (i) The RBI controls the inflows and outflows of foreign exchange in the country. All the foreign exchange transactions are routed through the RBI.
- (ii) It strives to maintain stability of the exchange rate.
- (iii) It enforces exchange control regulations as directed by the central government.
- (iv) It buys or sells foreign exchange in order to bring stability of the exchange rate of the domestic currency.

5. **Clearing House for transfer and settlement :** This is an important function of the RBI. It acts as a clearing house for transfer and settlement of mutual claims of the commercial banks on each other. As a result, transactions between banks can be settled quickly and conveniently.

6. **Supervisory function/role :** The RBI is entrusted with various powers to regulate all the scheduled commercial banks and cooperative banks to establish a sound and vibrant banking system in the country. The RBI's supervisory functions are :

- (i) It issues licences for establishing new branches of the existing banks.
- (ii) It issues licences for establishing new banks to the promoters of financial institutions.
- (iii) It inspects the functioning of the banks.
- (iv) It receive and redress the complaints of customers and bank officials relating to irregularities and fraudulent practices indulged by some unscrupulous persons.
- (v) It regulates the operations of banks for protecting the investments of funds.
- (vi) It approves amalgamation of banks.

7. **Promotional and Developmental Functions :** In a developing country like ours, the central bank, apart from performing traditional functions, performs various promotional and developmental functions for fostering the economic growth and development of the country. Such promotional and developmental functions of the RBI are :



- (i) **Promoting Development Bank :** The RBI plays a pivotal role in promoting the development banks for raising and long-term industrial credit to industries. The RBI took initiatives to establish some development banks in India such as ICICI, IDBI, IDBI, SIDBI, etc.

- (ii) **Establishment of National Housing Bank (NHB) :** National Housing Bank was established by the RBI as a subsidiary of the RBI. For meeting the growing demand for housing loans in the country, NHB provides sufficient amount of funds to commercial banks. Commercial banks give housing loans from that fund.

- (iii) **Promoting foreign trade :** The RBI strives to promote foreign trade and encourages the business firms to enter foreign exchanges. It established Export-Import (EXIM) Bank in India for providing financial assistance to the entrepreneurs involving in foreign trade.

- (iv) **Promoting agricultural credit :** The RBI promoted the National Bank for Agricultural and Rural Development (NABARD) in 1982 for assisting the farmers by providing agricultural credit on easy terms. NABARD is the nodal agency of the government of India for rolling out agricultural credit to the farmers through several banking institutions.

- (v) **Imparting training :** The RBI has formed a training college for imparting practical training to the banking staff.

- (vi) **Promoting strong banking system :** The RBI is entrusted with the responsibility of promoting and establishing a buoyant banking system in the country. The RBI constantly endeavours for formulating various proactive policies and executing such policies for strengthening the banking system in the country.

8. **Regulatory functions :** The RBI is the apex regulatory body of the Indian money market. It is being entrusted with the responsibility of regulating and controlling the entire banking system in the country. It has got some statutory powers to regulate and control the banking system in India. It adopts various techniques to regulate the overall money supply in the country in tandem with controlling the inflation or deflation in the country. Credit control techniques adopted by RBI are :

- (i) **Open Market Operations :** Open market operations refer to the buy and sale of government and other approved securities by the central bank to control the volume of money supply in the country. When the economy faces the inflationary pressure, the Reserve Bank of India, in order to squeeze the money supply, sells the government and other approved securities in the market. General people withdrawing money from their bank deposits, buy these securities. As a result, cash holding position of commercial banks get reduced. It affects their power of credit creation. In this way, the RBI controls credit in the system. Again, at the time of recession, the RBI takes expansionary monetary policy to boost the overall money supply in the country. In such cases, the RBI buys government and other approved securities and enhances the money supply in the economy.

- (ii) **Variations of bank rate / repo rate :** Repo rate or repurchase rate is the rate of interest at which RBI provides short-term credit (say, for 7 days) to commercial banks by rediscounting the bills of exchange of commercial banks. On the other hand, the rate at which the RBI rediscounts the bills of exchange submitted by the commercial banks while providing them medium to long-term credit facilities is called as the bank rate. By changing this rate RBI controls the money supply in the country.

- (iii) **Cash Reserve Ratio (CRR) :** Commercial banks have to keep a certain percentage of their net time and demand deposits with the RBI in the form of cash reserves. This is known as cash reserve ratio (CRR). By changing the 'CRR' percentage (between 3% to 15%) RBI controls credit in the system.



(iv) **Statutory Liquidity Ratio (SLR)** : All the scheduled commercial banks have to keep a certain percentage (at least 20%) of total demand and time liabilities with the RBI. This is known as Statutory Liquidity Ratio (SLR). Commercial banks may provide cash, gold, foreign exchange, government securities to the RBI for maintaining the requisite ratio of SLR. The RBI can vary the ratio between 20% to 40%.

(v) **Selective credit control** : The RBI provides restrictions on credit allowed by commercial banks in some cases in order to prevent illegitimate speculation, hoarding of essential commodities, such as, rice, wheat, sugar, etc. The RBI induces commercial banks to lend more to the priority sectors, such as agriculture, house building, village industries and restrains them from giving more credit to sectors where 'more credit will induce speculation'. This method of credit control of the RBI is known as selective credit control.

1.4.5. RBI as Government's Bank

The Reserve Bank of India (RBI) is the banker to the central government and state governments. As the banker to the government, it performs several functions. These are discussed below :

1. **Receiving money and making disbursement** : The RBI transacts banking business of the Central Government and State Governments. It receives money on behalf of the government and makes several government's payments on their behalf.
2. **Management of public debts** : It manages public debts. It issues loans on behalf of the governments.
3. **Raise funds for the Government** : The Government, for raising finance from the market, issues its securities when they need funds. The RBI takes the responsibility to issue such government securities and raise funds on their behalf.
4. **Provide loans** : The RBI sometimes provides short-term loans to the government. State governments also raise short-term and medium-term loans from the RBI.
5. **Dealing with foreign currency** : The RBI takes the responsibility to buy and sell of foreign currencies on behalf of the government.
6. **Financial advisor** : The RBI acts as the financial advisor to the government. It advises the government with regard to the formulation of economic policies, executing those economic policies, government's deficit financing, formulation of country's five years plans, government's foreign trade policy, etc.
7. **Helping in framing Government's fiscal policy** : Every year the central government and state governments make their fiscal policies through the union budget and the state budgets respectively. Through the fiscal policy, government uses the instruments of taxation, public spending and public borrowing to achieve objectives of economic policy. In framing and executing this policy, the RBI provides all types of help to the government and strives to make it successful.
8. **Helping the Government to bridge the fiscal deficit** : The governments of developing countries like ours very often face the problem of budgetary deficit or fiscal deficit. The RBI, considering the prevailing economic situation, advises the government regarding the ways and means of bridging the fiscal deficit in a prudent manner. Before 1997, there was a system of 'automatic monetization' of budgetary deficit, i.e., the RBI used to print currency notes against the government securities to cover the budget deficit. But this system has been replaced by 'ways and means advance' to the government by the RBI since 1997.
9. **Bringing economic stability** : The RBI advises the government regarding various economic matters. When some critical economic problems crop up into the economy, the RBI and the



government take various policies in a co-ordinated manner and try to establish economic stability in the country.

10. **Raising foreign loans** : The RBI raises the foreign loans from various countries on behalf of the government.

From the above discussion it can be said that RBI is the banker of the Government.

1.4.6. RBI as Banker's Bank

The Reserve Bank of India (RBI) acts as the banker of the all scheduled commercial banks and co-operative banks. The Reserve Bank of India Act 1934, and the Banking Regulation Act 1949, have given enormous powers to the Reserve Bank of India to regulate and control the functioning of commercial banks. Being the apex regulatory body in the Indian Banking System, it regulates the amount of cash reserves of the commercial banks and controls the power of credit creation of the commercial banks and thereby controls the money supply in the country.

The RBI acts as the custodian of cash reserves of commercial and other banks. Commercial banks are under statutory obligations to keep a portion of their deposits as reserves with the RBI which is known as variable reserve ratio. It comprises of the minimum cash reserve ratio (CRR) and the statutory liquidity ratio (SLR). The RBI, in order to regulate the money supply in the economy, changes the rate of 'CRR' and 'SLR' from time to time. When these ratios increase, commercial banks have to keep more cash deposits and other assets, such as, gold, government securities, etc. with the RBI. As a result, cash deposits get reduced and the power of credit creation of the banks is also reduced. Ultimately money supply in the economy squeezes for the time being. Again, in order to enhance the money supply in the country, the RBI reduces the rates of 'CRR' and 'SLR'. In this manner, the RBI regulates the credit creating capacity of the commercial banks.

When commercial banks and co-operative banks suffer from the paucity of funds to provide credit to the industries, they may borrow funds from the RBI by discounting the bills of exchanges, government securities and other approved securities. The rate at which the RBI provides credit to banks is known as bank rate. So, the commercial banks get credit from the RBI as and when required, and also in the situation when they fail to acquire funds from other sources. That is why the RBI is known as the **lender of the last resort**.

The RBI acts as a clearing house for the transfer and settlement of mutual claims of the commercial banks on each other. As a result, mutual claims of the commercial banks on each other are settled quickly and conveniently. The RBI, by providing this service to banks, helps the commercial banks and other banks to function smoothly.

The RBI renders the following supervisory services to the commercial and co-operative banks :

1. It issues licences for establishing new branches of the existing banks.
2. It issues licences for establishing new banks to the promoters of the financial institutions.
3. It inspects the functioning of the banks.
4. It receives and redresses the complaints of the customers and bank officials relating to irregularities and fraudulent practices indulged by some unscrupulous persons.
5. It regulates the investment of funds.
6. It approves the internal reconstruction and amalgamation of banks.

From the above discussion it can be concluded that the RBI is the friend, philosopher and guide to the commercial banks and co-operative banks. So, it is said that the RBI is the bankers' bank.



1.4.7. RBI as lender of Last Resort

The Reserve Bank of India (RBI) being the watchdog of the Indian money market, regulates the entire money market operations. The RBI acts as the banker of the all scheduled commercial co-operative banks. It acts as the custodian of cash reserves of commercial banks and co-operative banks. It provides loans to banks by discounting or rediscounting bills of exchange, government securities and other approved securities. Moreover, it renders advisory services to the banks regarding buying and selling of various securities.

When the country's macroeconomic situation recovers from the slowdown or when the economy remains in the boom phase, demand for bank credit in the country increases by leaps and bounds. The demand for bank loans comes from the entrepreneurs (that is, investment demand) and from the customers (that is, consumption demand). Banks provide credit to them. Sometimes the demand for bank loans in the economy matches at that level where banks fail to meet that demand. A supply-side constraint for bank loans is witnessed. As a result, economic activities of the country may be strangled. At that juncture, the RBI comes forward to provide credit to the commercial banks and co-operative banks so that they are able to meet such excess demand for loans in the economy. The RBI provides short-term credit to banks by discounting or rediscounting bills of exchange, government securities and other approved securities. In this way, the RBI supports the banks to extend their operations. Banks get sufficient amount of credit from the RBI when there is no other option for the banks to get funds to meet such demand for loans. For that reason, RBI is called as the lender of the last resort.

1.4.8. Credit Control Mechanism of RBI

The Reserve Bank of India (RBI) being the apex regulatory body in the Indian money market, regulates the entire money supply or controls credit in the country. In order to bring stability in the price level in the country, total money supply needs to be controlled. The RBI adopts various methods to regulate the total money supply in the country. The methods of credit control may broadly be classified under two heads; these are:

- Quantitative Credit Control Method:** The credit control methods which aim at controlling the total quantity of credit in the economy are called as quantitative credit control methods. It comprises of variation of bank rate, open market operations, variable reserve ratio (statutory liquidity ratio (SLR) and minimum cash reserve ratio (CRR)), repo and reverse repo rates, etc.
- Selective or Qualitative Credit Control Method:** The credit control methods which aim at controlling the credit flow in the economy on the basis of the 'quality of credit', i.e., on the basis of creditworthiness of the borrowers, purpose of taking loans, etc., then such methods are considered as qualitative credit control methods. Through this method, the RBI encourages the commercial banks to provide much credit to the priority sectors, such as, agriculture, irrigation, rural developmental activities, small and tiny industries, etc., and discourages to provide loans used for unproductive purposes, such as, personal loans etc. It comprises of Margin requirement, Rationing of credit, Moral Suasion and Direct action.

The above methods of credit control of the RBI will be discussed in the next section.

• Quantitative Credit Control Method

The instruments of quantitative credit control method of the RBI can be explained as follows:

- Bank Rate Policy:** Bank rate or discount rate is the minimum amount of rate at which the RBI provides credit to the commercial banks by discounting or rediscounting the approved first class bills of exchange and government securities held by the commercial banks. The RBI



regulates the money supply or volume of credit in the economy by changing this rate from time to time. Interest rate charged by commercial banks to the borrowers of loans and the bank rate charged by the RBI are inter-related. A change in the bank rate creates an impact on the lending rates of commercial banks. Lending rates determine the total amount of bank credit in the economy. So, the RBI, by making changes the bank rate, can control the bank credit in the economy.

In the inflationary situation, that is, when the general price level in the economy moves up gradually, the RBI raises the bank rate. As a result, the cost of loans borrowed by the banks increases. It leads to a corresponding increase in the rate of interest charged by the banks to the borrowers. It discourages the borrowers to raise loans from banks. Gradually total demand for bank loans decreases and, in turn, it tames the total money supply in the economy. In this way, RBI manages the liquidity position in the system.

Table-1.3
Movements in the Bank Rate

Month/Year	Bank Rate (%)	Month/Year	Bank Rate (%)
July, 1951	3.0	April, 2000	7.0
November, 1953	3.5	October, 2001	5.5
July, 1964	5.0	October, 2002	6.25
April, 1974	9.0	April, 2003	6.0
July, 1981	16.0	January, 2005	6.0
July, 1991	11.0	April, 2009	6.0
October, 1991	12.0	July, 2010	6.0
April, 1997	11.0	May, 2011	6.0
June, 1997	10.0	February, 2012	9.5
January, 1998	11.0	April, 2012	9.0
April, 1998	10.0	April, 2015	8.5
May, 1998	9.0	April, 2016	7.0
April, 1999	8.0	December, 2020	4.25

Source: Compiled from Economic Survey (Government of India, several issues).

- Open Market Operations:** In order to regulate the credit or money supply in the economy, the RBI adopts open market operations. It refers to purchase and sale of government securities, such as, treasury bills, government securities, other approved securities, foreign currencies, etc., by the RBI. Purchase and sale of such securities influence the cash reserves with the commercial banks. So, the power of credit creation by the commercial banks is also influenced. When the economy faces the inflationary pressure, then total money supply in the economy increases. At that juncture, the RBI sells the government and other approved securities in the market. Buyers of these securities pay the RBI by withdrawing money from their bank accounts. Commercial banks also buy these securities. As a result, cash holding position of commercial banks gets reduced. This leads to the commercial banks to reduce their advances and loans. It reduces the power of credit creation by the commercial banks. On the contrary, when the money supply in the economy decreases, the RBI purchases these securities from the open market and money flows out of it. Money supply in the economy increases with the increase in power of credit creation by the commercial banks.
- Variable Reserve Ratios:** Commercial banks are required to keep a certain percentage of their demand and time deposits with the RBI in the form of cash reserves, gold, government



securities, other approved securities, foreign currency, etc. This is known as variable ratio. The RBI uses this ratio as a credit control technique. It comprises of

- Minimum Cash Reserve Ratio (CRR), and
- Statutory Liquidity Ratio (SLR).

The 'CRR' is a portion of banks' net demand and time liabilities or deposits that need to be kept with the RBI in the form of cash reserves. The CRR can be varied between 3% to 15% by the RBI. These deposits of banks with the RBI earn no interest. It is maintained on a fortnightly basis. It is used by the RBI as a credit control tool. When the economy faces the problem of inflationary pressure, the RBI enhances the 'CRR' in order to reduce the money supply in the economy. So, the banks keep more cash reserves with the RBI than before. Thus, the availability of loanable funds of commercial banks get reduced. It leads to reduction of banks' credit in the economy. Gradually with the decrease of money supply in the economy, inflation comes down to the comfortable zone. Again, in order to enhance the total credit or money supply in the economy, RBI reduces the 'CRR' during recession.

Table-L4
Movements in the Cash Reserve Requirements (CRR)

Year	CRR (%)	Year/Month	CRR (%)
July, 1962	3.0	November, 2002	4.75
November, 1970	3.0	June, 2003	4.5
April, 1976	6.0	January, 2003	5.0
June, 1981	7.0	March, 2007	6.0
January, 1983	8.0	November, 2007	7.5
May, 1984	9.0	July, 2008	9.0
July, 1988	10.0	November, 2008	5.5
April, 1989	13.0	April, 2009	5.0
June, 1993	14.0	July, 2010	6.0
August, 1994	15.0	May, 2011	6.0
June, 1996	13.0	January, 2012	5.5
August, 1998	11.0	March, 2012	4.75
May, 1999	10.0	March, 2013	4.0
November, 1999	9.0	April, 2016	4.0
April, 2000	8.0	April, 2020	3.0
December, 2001	5.5		

Source: Compiled from Economic Survey (Government of India), various issues.

In addition, the RBI adopts Statutory Liquidity Ratio (SLR) as a quantitative credit control instrument.

Again, 'SLR' is that portion of time and demand liabilities of the commercial banks which have to be kept with the RBI in the form of cash reserves, gold, foreign currency, government bond and other approved securities.

$$\therefore \text{SLR} = \frac{\text{Cash in hand} + \text{Cash with other banks} + \text{gold} + \text{approved securities}}{\text{Total time \& demand deposit}}$$

This SLR can be varied between 20% to 65% by the RBI.

Banks are required to invest a certain percentage of their time and demand deposits in assets specified by the RBI for maintaining the 'SLR'. In order to reduce the total money supply in the economy, the RBI enhances the 'SLR'. So the banks have to invest more funds in gold, government securities and other securities in order to maintain the required rate of SLR. It reduces the credit creating power of the commercial banks. It leads to the reduction of money

supply in the economy. Again, in order to enhance the money supply in the economy, RBI reduces the rate of SLR.

Table-L5
Movements in Statutory Liquidity Ratio (SLR)

Year	SLR (%)	Year	SLR (%)
1970	30.0	2001	25.0
1973	32.0	2005	23.0
1974	33.0	2008	24.0
1987	37.5	2009	24.0
1988	38.0	2012	23.0
1990	38.5	2014	22.5
1996	28.0	2016	21.25
1997	25.0	2020	19.00

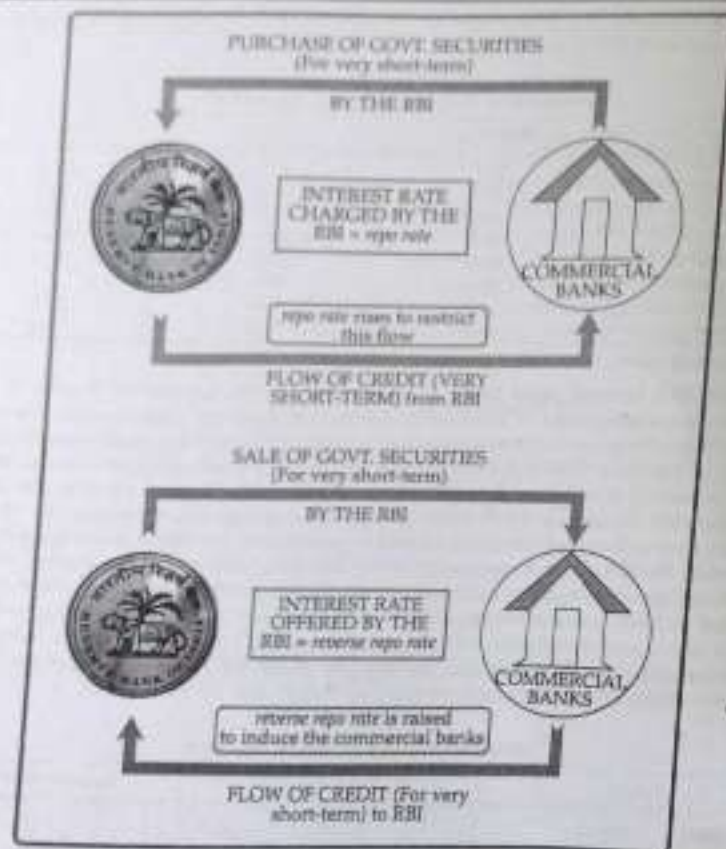
Source: Economic Survey (Government of India), various issues.

Repo rate and reverse repo rate: As a part of Liquidity Adjustment Facility (LAF), RBI uses repo and reverse repo as instruments for making liquidity adjustment in the economy. The rate at which commercial banks raise loans from the RBI for very short period (say, 7 days) is known as repo rate. This is done by buying government bonds from commercial banks with a prior agreement to sell them back at a fixed rate. By enhancing this rate, the RBI intends to curtail the total demand for credit in the system. Reverse repo is just the opposite of repo rate. When the surplus funds of commercial banks is parked with the RBI, it generates some returns. Thus, when the RBI wants to pump out excess liquidity from the money market, then it sells government securities to the commercial banks with a repurchase agreement. Here, the interest rate fixed on these government securities is called as reverse repo rate. The RBI generally raises the repo rate to control inflation, and reduces it to control economic recession. Since repo rate can be considered as the short-term lending rate of the RBI, and the reverse repo rate as the short-term borrowing rate, so repo rate remains higher than reverse repo rate.

Table-L6
Movements of repo & reverse repo rates

Period	Repo rate	Reverse repo rate
2005, October	6.25	3.25
2006, June	6.75	3.75
2008, November	7.50	6.00
2009, April	4.75	3.25
2010, April	5.25	3.75
2011, October	8.50	7.50
2012, December	8.00	7.00
2013, May	7.25	6.25
2014, December	8.00	7.00
2015, September	6.75	5.75
2016, April	6.50	6.00
2017, December	6.00	5.25
2018, December	6.50	6.25
2019, December	5.15	4.90
2020, December	4.00	3.35

Source: RBI



● Selective or Qualitative Credit Control Method

Through this method, the RBI intends to regulate the allocation of credit or funds among various sectors or users without influencing the general availability of credit. Qualitative methods of credit control are discussed below:

- (i) **Margin Requirement:** Banks provide credit to the borrowers after keeping adequate amount of security or mortgage. Banks do not provide loans equal to full amount of value of mortgage or security. The amount of loan is always lesser than the value of mortgage. This difference, that is, between the value of security and the amount of loan is known as margin requirement. This is done in order to protect themselves against any fall in the value of the security. The RBI fixes this margin requirement, and all the commercial banks must abide by this norm while extending credit to the borrowers. In the inflationary situation, in order to tame the money supply in the economy, the RBI enhances the rate of margin requirement. As a result, availability of credit gets reduced. On the other hand, in order to enhance the money supply in the economy, the RBI reduces this margin.



- (ii) **Rationing of Credit:** Through this method of credit control, the RBI fixes the ceiling of the total amount of bank loans and their purposes. When a particular sector of the economy or some priority sectors, such as, agriculture, irrigation, infrastructure sector, etc., require credit at low rates of interest, the RBI instructs the commercial banks to provide maximum amount of credit to these sectors and the RBI fixes a ceiling of the bank loans in other sectors. In this way, the RBI ensures more bank credits to some sectors and restricts credit to other sectors.
- (iii) **Moral Suasion:** In this method, the RBI makes an informal persuasion to the heads of the commercial banks regarding granting of bank credits. The RBI convenes meetings with the heads of the commercial banks and makes informal suggestions or advice and even requests regarding the adoption of a particular monetary policy and appeals to them to follow this policy.
- (iv) **Direct Action:** It refers to the directives given by the RBI to the commercial banks from time to time to regulate their lending and investment activities. Usually direct action is followed against the particular banks which do not follow the policies of the RBI.

4.9. Liquidity Adjustment Facility (LAF)

On the basis of the recommendations of second Narasimham Committee, 1998, an interim LAF was introduced in 1999 to provide a ceiling and the fixed rate repo. These rates continued to provide a floor for money market rates.

Liquidity Adjustment Facility was introduced for the first time from June 2000 onwards. Subsequent revisions were made in 2001 and 2004. The committee had recommended that RBI's support to the market should be through a Liquidity Adjustment Facility (LAF) operated by way of repo and reverse repo providing a reasonable corridor to market players. As mentioned above, the two components of LAF are repo rate and reverse repo rate. We have already explained these notions in subsection 1.4.8.

RBI conducts the repo auctions and reverse repo auctions on daily basis from Monday to Friday except holidays. The tenure of the repo is seven working days. All the scheduled commercial banks are eligible to participate in auctions except the Regional Rural Banks. Further, the Primary Dealers (PDs) having Current Account and SGL Account (Subsidiary General Ledger Account) with the Reserve Bank, Mumbai are also eligible to participate in the repo and reverse repo auctions.

Under the Liquidity Adjustment Facility, bids need to be for a minimum amount of ₹ 5 crore and in multiples of ₹ 5 crore thereafter. Only Government of India dated Securities/Treasury Bills are used as collateral under LAF as of now.

4.10. Marginal Standing Facility (MSF)

Further, Marginal Standing Facility is a new window created by Reserve Bank of India in its credit policy released in the first week of May 2011. MSF is the rate at which the banks are able to borrow overnight funds from RBI against the approved government securities. It is to be noted that this window was created for commercial banks to borrow from RBI in certain emergency conditions when inter-bank liquidity dries up completely and there is a volatility in the overnight interest rate. To curb this volatility, RBI allowed them to pledge G-secs (government securities) and get overnight funds from RBI at a rate higher than the repo rate.

The overall idea behind the MSF is to contain volatility in the overnight inter-bank rates (or the call rates). The rate of interest on MSF is above 100 basis points (One basis point is equivalent to 0.01% above the repo rate. The banks can borrow up to 1 percent of their net demand and time liabilities (NDTL) from this facility. This means that difference between Repo Rate and MSF is 200 basis points. So, repo rate will be in the middle, the reverse repo rate will be 100 basis points below and the MSF rate is 100 basis points above it. Thus, if repo rate is X%, then reverse repo rate is 4% and MSF is X+1%.



1.4.11. Distinctions between Quantitative and Qualitative Credit Control

Some of differences between the qualitative and quantitative credit control policy are as follows:

Quantitative Credit Control	Qualitative Credit Control
1. This credit control measure aims at regulating the total volume of credit in an economy.	1. This measure aims at controlling the flow of credit in some selected or particular sectors of the economy.
2. It regulates the availability of loanable funds with the commercial banks and controls government in all the sectors of an economy.	2. It regulates the flow of credit from commercial banks on the basis of the purpose, investment or the credit-worthiness of the borrower.
3. This control measure uses the instruments like bank rate, cash reserve ratio, statutory liquidity ratio, open market operation etc.	3. This measure uses the credit control instruments such as margin money, differential rate of interest, etc.
4. This measure affects equally the backward and advanced sections of an economy.	4. This measure encourages the flow of credit in some priority sectors and does not allow the backward and economy of a country.
5. This measure is more suitable for a developed economy.	5. This measure is suitable for a less developed economy.

1.4.12. Distinctions between CRR and SLR

Both Minimum Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) are the quantitative methods of credit control of the RBI. By changing these rates, the RBI regulates the money supply in the country. Although both the ratios are used by the RBI for monitoring credit in the system, there are some differences between these two. The main points of distinction are discussed below:

Points of Distinction	Cash Reserve Ratio (CRR)	Statutory Liquidity Ratio (SLR)
1. Definition	It refers to that percentage of total demand and time liabilities of scheduled commercial banks which have to be kept with the RBI in the form of cash reserves.	It refers to that percentage of total deposits of scheduled commercial banks which have to be kept with the RBI in the form of cash reserves, government securities and gold.
2. Purpose	The main purposes of 'CRR' are:- (i) to regulate the total money supply in the system. (ii) to control inflation or deflation in the economy. (iii) to maintain adequate amount of liquidity in the system. (iv) and to bring safety of bank deposits.	The main purposes of 'SLR' are:- (i) to establish solvency of banks. (ii) to control bank credit. (iii) and to encourage banks to invest their funds in government securities and other approved securities.
3. Rate	The rate of 'CRR' is comparatively lower than the rate of SLR. CRR varies between 3-15%.	The rate of 'SLR' is comparatively higher. It varies between 20-40%.
4. Fines	As a punitive measure, the RBI charges fines @ 2% to 3% p.a. to the banks which do not abide by the CRR norms.	No fine is imposed by the RBI to the banks if they do not abide by the 'SLR' norms.
5. Assets Deposited with the RBI	Only cash is to be kept as deposit with the RBI for complying 'CRR' norms.	Cash, gold and government securities can be deposited with the RBI for complying 'SLR' norms.
6. Returns	CRR earns no interest.	'SLR' generates some returns for the banks as the banks invest their funds in government and other approved securities for maintaining 'SLR'. With the SLR, from such securities, banks earn some interest.



1.4.13. Limitations of Credit Control Mechanism

There are some limitations of the quantitative methods of credit control of the RBI. These are discussed below:

- Multiple influencing factors:** It is presumed that with the changes of bank rate, the market rate of interest gets changed. It influences the overall money supply in the economy. But the money supply in the economy depends on various factors. Only by changing the rate of interest, total money supply cannot be influenced to a desired level.
- Huge cash reserves:** Sometimes commercial banks possess huge cash reserves. As this position, only by changing bank rate or by open market operations or by changing the CRR or SLR, the RBI cannot control the supply of money fully.
- Matured market condition:** In developing economies like ours credit markets are not well developed. In these economies, quantitative methods of credit control do not work effectively. Again, if the securities' market is not developed enough then open market operations cannot be effective.
- Existence of unorganised sector:** Money supply in huge quantity from the unorganised sector jeopardises the efficacy of open market operation and other credit control instruments of the RBI.
- Investment opportunities:** At the time of economic boom, investment opportunities are created in the economy. The industries become keenly interested to invest at this time and they procure loans from banks and other financial institutions despite high rate of interest. At this sector, money supply cannot be controlled by this method.
- Existence of non-recognised bankers:** Non-recognised bankers also supply credit to the market. Sometimes it affects the purpose of the open market operations and other quantitative credit control instruments.

Limitations of the Qualitative Methods of Credit Control of the RBI

Following are the shortcomings of the Qualitative Methods of credit control of the RBI:

- No authority to control NBFCs:** For effective credit control in the economy it is necessary to control credit of all commercial banks and non-banking financial companies (NBFCs). But the RBI has no power or authority to control the credit given by the NBFCs. In 2015 there were over 11,842 NBFCs in India (registered with the RBI).
- Non-obeying the advice of RBI:** Effectiveness of this method largely depends on the ability of the RBI to control commercial banks. Sometimes all the commercial banks do not abide by the instructions given by the RBI. In such circumstances, this method does not work effectively.
- Non-existence of organised credit market:** This method of credit control works effectively only when efficient and well organised credit market prevails in the country. But in developing countries like ours credit market is not well organised and efficient. So, this method cannot be applied effectively in developing countries.
- Corruption:** In developing countries, with the slackening of tight control over the money market, the scope of corruption becomes higher. This method cannot work properly in developing countries where corruptions and fraudulent activities are perpetrated by some unscrupulous persons.
- Existence of Unholy Nexus:** This method fails to detect the purposes for which the loans are being used ultimately. Some unholy nexus between speculators and commercial banks may spoil the initiative of the RBI.



1.4.14. Remedial Measure by RBI to strengthen Indian Banking System

Still now more than 40% of the Indian adult people do not have any bank account. It affects the total financial system in India. Banking services must be expanded among almost all the people in rural areas. So, more banks should be set up particularly in rural areas, number of bank branches should be enhanced and the RBI should take proactive measures so that banking services are reached to the low income groups and banking services should be delivered at an affordable cost. So, financial inclusion via-a-vis banking inclusion is a must.

For this, we are

- to bring more people under the ambit of banking services;
 - to expedite mobilisation of savings;
 - to augment capital formation;
 - to taper black money transactions;
 - to enhance the tax collection;
 - to bring the economy on a strong footing;
 - to plug the loopholes in the financial system;
 - to fetch several benefits and subsidies to the right persons;
 - to harmonize the multiplier-accelerator relationship between savings and investments.
- Experts opine that India must have three or four large sized banking institutions such as HSBC, Citibank, Standard Chartered, etc. They envisage that within few years a lot of mergers and acquisitions will be witnessed in the Indian banking sector. Fragmented banking structures need to be repaired. Large-sized banks will help in reducing the cost of banking operations and more people can be brought under the ambit of banking services. The benefits of 'scale' will obviously step in.
- The RBI should provide more banking licences to other financial institutions so that more banks can be established. In January 2014, RBI has given the banking licences to two financial institutions. These are (i) IDFC and (ii) Bandhan Financial Services. So, a slew of measures is to be taken by the RBI as part of a broader road map towards greater financial inclusion in India.

Experts perceive that following measures may be taken by the RBI to bolster up the Indian banking system:

- Banks should be given instructions to reduce gross non-performing assets.
- Legal reforms are required to facilitate recovery of banks' stressed assets that is, NPAs.
- Amendment in the Banking Regulation Act is required to allow greater autonomy, higher private sector shareholding, etc.
- Banks should be given more functional autonomy.
- Financially weak banks need restructure or merged with other large-sized banks.
- Liberalisation of the branch expansion policy is needed. The concept of payment banks has emerged which require small investments. These banks will not disburse any loans.
- Awareness among the general public about the importance of banking services has to be created.
- PSU Banks and the private sector banks are to be allowed to raise further capital needed for expansion of branches and to strengthen their capital adequacy.
- The RBI should lift its restrictive policy towards the expansion of bank branches. It should allow the banks to establish more branches particularly in rural areas.
- Strong surveillance system must be introduced to spot the fraudulent transactions through the banks. It would bring more transparency.



- RBI and the government of India should adopt systemic reforms in the banking operations.
- Preventive measures must be taken by the RBI and the government to tame the unruly nexus among politicians, businessmen and the top brasses of public sector banks (PSU Banks).
- RBI should develop some innovative financial assets for the customers.
- RBI should adopt more stringent measures to tame the stubbornly high inflation.
- Indian money market witnesses the liquidity crisis from time to time. It stumbles the economic activities at large. So, RBI should take necessary measures so that the system does not suffer from the liquidity crisis.
- RBI should encourage small banks and low-making banks to go for merger with large-sized banks.
- Banks should penetrate to the unbanked regions for deposits' growth.
- RBI can open a special repo window for mutual funds, large non-banking financial companies (NBFCs) and housing finance firms, and money can be offered in exchange of highly rated securities as collateral.
- RBI should take necessary measures to bring the stability of the Indian currency.
- RBI should take stern actions against the operators of unauthorised collective investment schemes (say, Sarada Group, Rise Valley Group etc.)

1.4.15. Structure of Indian commercial banking system

A commercial bank is a financial institution that accepts deposits from the public repayable on demand, and grants short-term and medium-term loans to individuals and business firms. In the course of accepting deposits and extending loans, it creates credit in the system. Commercial banks are of two types, such as — (i) scheduled commercial banks (Banks which are in the second schedule of RBI and having at least ₹ 5,00,000 as capital) and, (ii) Non-scheduled commercial banks (Banks which are not in the second schedule of the RBI and they are not under the purview of RBI's control).

The structural change of the commercial banking system in India had taken place in 1949 through the enactment of the Banking Regulation Act in the parliament. Banking Regulation Act endows wider powers to the Reserve Bank of India to regulate and control the operations of commercial banks. The State Bank of India (SBI) became the first nationalised commercial bank in India. The central Bank of India was nationalised in 1955, and named as the State Bank of India. In 1960, sixteen commercial banks were nationalised by the government of India. Afterwards, in 1980, six more commercial banks were nationalised. In 1993, however, one of the nationalised banks, viz., the New Bank of India was merged with Punjab National Bank. Subsequently IDBI Bank and partia Marila Bank were considered as nationalised commercial banks by the RBI. So, in 2018, there are 27 nationalised commercial banks. If SBI and its 5 associated banks are included in it, we get 32 public sector commercial banks in India. The Reserve Bank of India has issued banking licences to private sector financial institutions from time to time. The Regional Rural Banks (RRBs) were set up in rural areas under the RRB Act (1975). At first 5 RRBs were set up. In June 2016, for example, their number increased to 139. However, through the amalgamation of various RRBs, this number has reduced to 86 in 2014. Very recently in January, 2014, RBI issued two banking licences to IDFC and Bandhan Financial Services. Private sector banks have been doing banking businesses successfully parallelly with public sector banks. The number of non-scheduled commercial banks has gradually declined from 16 in 1969 to only 4 in 2013.



Besides issuing the Universal Bank License for commercial banks, the Reserve Bank of India (RBI) also grants the Differentiated Bank License to cater to the needs of poor and economically backward people who are deprived of banking services. Differentiated banks (the concept that became popular in 2007) are regarded as banking institutions which are licensed by RBI to provide specific banking services and products. Differentiated banks are distinct from universal banks as they function in a niche segment. One of the major objectives to create differentiated banks is to promote financial inclusion and payments. In India, we have primarily two types of such differentiated banking institutions, viz., Small Finance Banks and Payments Banks.

Small Finance Banks: Small Finance Banks are financial organisations that deliver financial support to the unbanked and untapped areas of a country. In India, they are registered as a Public Limited Company in the Companies Act, 2013. Like other traditional banks, these banks can engage in all fundamental banking activities, like accepting deposits and lending. The small finance banks are given scheduled bank status once they commence their operations, and found suitable as per Section 42(b)(a) of the Reserve Bank of India Act, 1934. The RBI granted in-principle approvals to 10 for Small Finance Bank (SFB) in September 2015. The main idea behind introduction of such banks by RBI is to target a specific market and customise these banks' operations on the basis of the preferences of those targeted markets. In 2021, there were 12 such small finance banks in India, e.g., Ujjivan Small Finance Bank, Equitas Small Finance Bank, ESAF Small Finance Bank, Suryoday Small Finance Bank, Proton Small Finance Bank, Janalakshmi Small Finance Bank, Utkashi Small Finance Bank, etc.

Basic features of these small finance banks are as follows:

- Small finance banks were recommended by the Nachiket Mor Committee on Financial Inclusion (2013).
- Area of operations of these banks remains smaller than the regular commercial banks.
- Though these banks can accept public deposit and extend loans, these banks cannot extend large amount of loans like traditional commercial banks.
- These banks would provide 90% of their loans to Micro, Small and Medium Enterprises (MSME) Sector.
- For Initial 3 years, 25% branches of these banks must be in rural areas to facilitate those areas.
- These banks are not allowed to set up a subsidiary to offer non-banking financial services to the customers.
- Target customers of these banks are MSMEs, small farmers, small businessmen, unorganised workers, etc.
- The Cooperative Banks cannot apply for having license to open such small finance banks.
- Small finance banks are governed by the provisions of Reserve Bank of India Act 1934, Banking Regulation act 1949 and other relevant statutes of the RBI.

There are some differences between the Small Finance Banks and the Commercial Banks. These are shown in the following table.

Differences between the Small Finance Banks and the Commercial Banks

Basis of Difference	Small Finance Bank	Commercial Bank
Who can promote	Individuals/ professional having 10 years experience in finance, NBFCs, microfinance companies, local area banks, etc.	As per guidelines issued by RBI
Promoter's Share	40% at the initial stage and it can be gradually reduced to 26% within 12 years	As per guidelines issued by RBI
Capital Required	Minimum Paid-up capital should be ₹ 100 Crore	Commercial banks have enormous amounts of capital.
Regulatory Requirements	Meet CRR and SLR requirements set by the RBI	Meet CRR and SLR requirements set by the RBI
Customer Reach	Customers are reached through its branches spread particularly in unbanked and untapped areas	Customers are reached through its branches spread across the country
Current Deposit	These banks can accept demand deposit like savings deposit without any fixed limit	These banks can accept demand deposit without any fixed limit
Time Deposit	These banks can accept Time Deposit such as Fixed Deposit and Recurring Deposit	These banks can accept Time Deposit such as Fixed Deposit and Recurring Deposit
Loan	These banks can offer loan. They must extend 75% loans to priority sectors; at least 50 per cent of its loan portfolio should constitute loans and advances of upto ₹ 25 lakh.	Can offer relatively large amount of loan to its customers. These banks are to extend 40% of the net bank credit to priority sectors
Remittance Services	Can provide both inward and outward remittance services	Can provide both inward and outward remittance services
Online Banking Solutions	Can offer online banking services	Can offer online banking services
Revenue	Earns revenue through lending services	Earns revenue through lending services, transaction charges, etc.
Debit Card	Can issue Debit Card and ATM Card	Can issue Debit Card and ATM Card
Credit Card	Can issue credit cards	Can issue Credit Card
Target Customers	MSME, Small Farmers, Small Businessmen, Unorganised Workers, etc.	Not restricted to any particular group or region
Foreign Services	These banks can provide various foreign exchange related services as prescribed by RBI	These banks can provide foreign exchange services, however, service charges are different for different banks



Basis of Difference	Small Finance Bank	Commercial Bank
Adoption of Technology	Should be fully technology driven right from the beginning	Gradually implement latest technology like internet transactions, mobile banking, etc.
Branches	For initial 3 years, 25% branches must be in rural areas to tap those areas	Can open branches anywhere in India
Third Party Products	Can sell third party products like mutual funds, insurance, pension products, etc.	Can sell third party products like mutual funds, insurance, pension products, etc.

Payments Banks: These banks are set up to promote financial inclusion by providing modest services like accounts and remittance or payments services to migratory labourers, low-income households, small enterprises, and business organisations in the unorganised sector and other users. Clients will not be able to borrow from these banks, and they would be forced to invest their money in bank deposits and government bonds.

The RBI (Reserve Bank of India) announced 'in-principle' approval to two payments banks in April 2014 as a new form of bank in India. These banks can accept a confined deposit, which is now capped at ₹ 2 lakhs per person (but this limit could be raised in the future.) In 2021, there were 6 Payments Banks in India such as India Post Payments Bank, Paytm Payments Bank, Fino Payments Bank, NSDL Payments Bank, Airtel Payments Bank, and Jio Payments Bank.

Features of Payment Banks:

- Promoters of these banks:** These banks are promoted by telecom entities, Public Sector Units, NBFCs (Non-Banking Financial Companies), supermarket chains, corporate houses, etc.
- Operation of both savings account and current accounts:** These banks operate both savings and current accounts, i.e. the demand deposits. While savings account will draw interest on a quarterly basis, current accounts will not gain any interest. Current accounts are specifically only for merchants. There is just one standard savings account for all customers, unlike traditional banks where savings accounts are divided into multiple tiers, depending on customer preference or account balance.
- No need to maintain a minimum balance in the deposit account:** For most of the payments banks in the country, there is no need to maintain a minimum balance in the account by the customers. The customers can opt for zero balance accounts. However, in case of Airtel Payments Bank, there is a minimum first-time deposit of ₹ 100.
- Limited acceptance of deposit:** Payments Bank, at present, can accept up to ₹ 2 lakh on savings and current deposits. A depositor cannot exceed this limit at any point of time. The amount can be deposited in parts or in full.
- Operated completely through digital mode:** Payments Banks are operated completely through digital mode eliminating the need to visit a physical bank for transactions.
- Interest payment on deposits:** Money in payments bank accounts is eligible to earn interest. The interest rates per annum may vary from bank-to-bank, but the minimum as specified by RBI is 4% simple interest. Airtel Payments Bank, however, offers higher interest rate at nearly 7.5%, followed by India Post Payments Bank at 5.5% while Paytm Payments Bank offers the standard 4% interest p.a.
- Issuance of both physical & virtual debit cards:** Payments bank offer both physical as well as virtual debit cards. The best part of the debit cards is that they are usable at all ATMs in the



country as well as abroad. While virtual debit cards have no charges, physical debit cards are accompanied by an annual fee.

- Facility of online fund transfer services:** Customers can avail online fund transfer services like NEFT, IMPS etc. using any payments bank. They are geared to deliver remittance services for migratory labourers.
- Distribution of simple monetary products:** Payments banks are permitted to distribute insurance policies, mutual funds, and other identical non-risk simple monetary products.
- Loans to customers are not allowed:** The payments banks are not allowed to provide any loan to the customers. Unlike traditional banks which largely rely on income from loans, payment banks invest the deposited amount in stock market or in government bonds for generating income.

Now, we can point out some of the differences between the Payments Banks and Small Finance Banks.

Points	Small Finance Bank	Payments Bank
Credit Card	They can issue credit cards	These banks cannot issue any credit cards
Client Reach	Clients are reached via the branches of the bank	Clients are reached via Mobile Banking
Time Deposit	They can accept time deposits like Recurring and Fixed Deposit	They cannot accept Time Deposits like Recurring and Fixed Deposits
Loan	They can offer small loans	These banks cannot provide any loan
Service	They primarily cater to the needs of small-scale industries and farmers	They primarily cater to the remittance service needs of migratory labourers

Local Area Banks: The Local Area Banks (LABs) are small private banks, conceived as low cost structures which would provide efficient and competitive financial intermediation services in a limited area of operation, i.e., primarily in rural and semi-urban areas, comprising three contiguous districts. The LABs were created following an announcement made by the then Finance Minister in the Union Budget in August, 1996, and RBI issued guidelines for setting up of Local Area Banks in 1996. LABs were set up to enable the mobilisation of rural savings by local institutions and, at the same time, to make them available for investments in the local areas.

The promoters of these banks may comprise of private individuals, corporate entities, trusts and societies with a minimum capital contribution of ₹ 2 crore. The minimum start-up capital of a LAB was fixed at ₹ 5 crore. The promoters of these banks were required to bring in the entire minimum share capital up-front. It was also decided that a family among the promoter group could hold equity not exceeding 40% of the capital.

LABs are being set up in district towns, their activities are focused on the local customers with a view primarily to agriculture and allied activities, small-scale industries, agro-industrial activities, trading activities and the non-farm sector. The LABs are also required to observe the priority sector lending targets at 40% of net bank credit (NBC) as applicable to other domestic banks. Their lending to weaker section was to be at least 25% of their priority sector lending (and 10% of net bank credit).

The LABs would be governed by the provisions of the Reserve Bank of India Act, 1934, the Banking Regulation Act, 1949 and other relevant statutes of the RBI. However, in regard to liquidity requirements and interest rates, these banks would be governed by the provisions applicable to the Regional Rural Banks (RRBs) established under the Regional Rural Banks Act, 1976. The LABs would also be subject to prudential norms, accounting policies and other policies as laid down by the RBI.



Only four LAFs are functioning at present. These are:

- (1) Coastal Local Area Bank Ltd. established on 27 December, 1999 with an area of operation comprising three contiguous districts viz. Krishna, Guntur and West Godavari with its head office at Vijayawada (Andhra Pradesh).
- (2) Capital Local Area Bank Ltd. established on 14 January, 2000 with its area of operation comprising three districts viz. Jalapothur, Kapatthala and Hoshangpur with its head office at Ponnagur (Tamil Nadu).
- (3) Krishna Shiksha Samrakshita Local Area Bank Ltd. established on 28 February, 2001 with an area of operation comprising three contiguous districts of Mahabubnagar in Andhra Pradesh, and Raichur and Gulbarga in the state of Karnataka with its head office at Mahabubnagar (Andhra Pradesh).
- (4) Sahasra Local Bank Ltd. which was incorporated on July 10, 2003 and received a banking licence from RBI to work as a Local Area Bank in the districts of Kothagur, Satara, Sangli, Belagavi & Pune (Maharashtra).

It is important to note that these LAFs are non-scheduled banks. Non-scheduled banks, by definition, are those banks which do not adhere to the regulations of RBI. They are not mentioned in the Second Schedule of the RBI Act, 1934, and are therefore deemed incapable of serving and protecting depositors' interests. Non-scheduled banks must also meet the cash reserve requirement, not with Reserve Bank, but with themselves. They are generally smaller in size and have a range of influence that is somewhat narrow. They are risky to do business with due to their financial limitations. The reserve capital of these banks is less than ₹ 5 lakhs.

Except in emergencies, non-scheduled banks are not eligible for financial assistance from the RBI. Non-scheduled banks are often denied the benefits enjoyed by scheduled banks. They are also not eligible to be a member of a clearing house. As a result, non-scheduled banks cannot facilitate interbank financial transactions and the clearance of cheques.

There were 11 Non-Scheduled State Cooperative Banks and 1528 Non-scheduled Urban Cooperative Banks in India as reported by RBI in 2021.

So far as the public sector scheduled commercial banks are concerned, at present (2022) there are 6 merged banks, viz. SBI, Bank of Baroda, Punjab National Bank, Canara Bank, Union Bank of India and Indian Bank (several public sector commercial banks were merged together as per government's decisions during 2017-2020) [Please go through the discussion in Subsection 1.5.6]. There are also 6 independent public sector commercial banks (i.e., not merged with any other commercial bank), viz. Indian Overseas Bank, UCO Bank, Bank of Maharashtra, Punjab & Sind Bank, Bank of India and Central Bank of India.

The expansion of branch offices of these banks is shown in a table.



Expansion of Branch Offices of Banks during 2014-19 in India

	2014 Total	2015 Total	2016 Total	2017 Total	2018 Total	2019 Total	2019 Rural	% of Rural Branches to Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Public Sector Banks	80,299	83,968	89,213	91,202	89,940	87,580	26,799	30.4
Regional Rural Banks	18,817	19,908	20,729	21,229	21,681	21,742	15,271	70.2
Private Sector Banks	17,627	19,469	24,234	26,571	28,219	31,889	6,826	21.4
Foreign Banks	304	311	313	383	385	300	12	4.0
Local Area Banks	91	106	118	82	93	93	34	15.1
Small Finance Banks				383	1,391	1,157	627	54.9
Payment Banks				2	146	754	35	4.4
Total	117,138	125,762	134,607	139,791	141,679	143,553	57,894	39.4

Source: Economic Survey (2019-20), Govt. of India [Public Sector banks' comprises of State Bank of India (and its wholly owned associates and Bhartiya Mahila Bank prior to April 1, 2017) and Nationalised banks. The IDBI Bank (which was classified as "Public Sector Bank" before January 21, 2019, is now classified as "Private Sector Bank"). Dena Bank and Vijaya Bank are now merged with Bank of Baroda w.e.f. April 01, 2019.]

Structure of commercial banks in India is shown by the following diagram.

Present Structure of Commercial & Other Banks in India

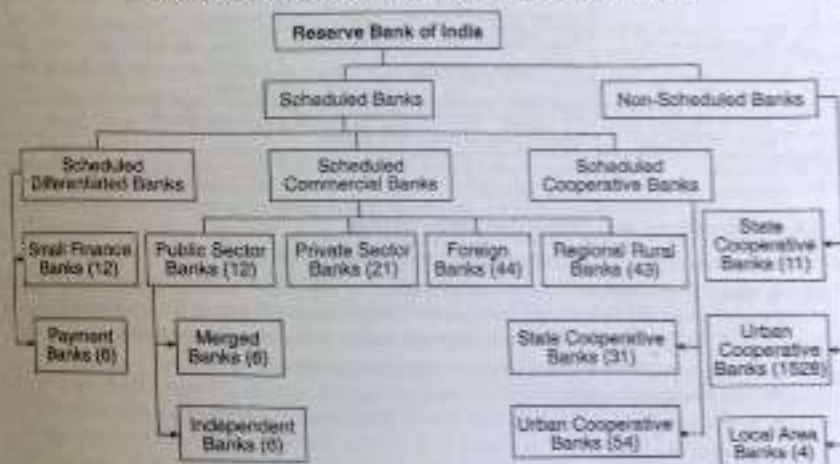


Figure 1.1 | show the number of such banks

Chart-3

1.4.16. Distinction between Scheduled Commercial bank and Non-Scheduled Commercial bank

Following are the points of distinction between Scheduled Commercial Banks and Non-Scheduled Commercial Banks.

Point of Distinctions	Scheduled Commercial Banks	Non-Scheduled Commercial Banks
1. Definition	Scheduled commercial banks are those banks which are included in the second schedule of the Reserve Bank of India.	Non-scheduled banks are those banks which are not under the ambit of the Reserve Bank of India.
2. Regulation	The Reserve Bank of India regulates the scheduled commercial banks.	The Reserve Bank of India does not regulate the Non-scheduled commercial banks.
3. Public faith	As these banks are well managed and under the strict control of the RBI, general public have full faith on these banks.	These are not under the control of the RBI. So, public do not become confident about these banks.
4. Requirement of Capital	These banks need huge amount of capital to run their operations.	These banks do not require much capital.
5. Interest Rate	These banks provide comparatively low rate of interest on deposits made by the public.	These banks provide higher rate of interest on deposits made by the public.
6. Importance	These banks play a pivotal role in the financial system.	These banks do not play significant role in the financial system.
7. Minimum Requirement of Capital	Minimum amount of capital of these banks is fixed at ₹ 5 lakh.	It is not fixed.
8. Economic Importance	These banks play a crucial role in the economy.	They play an insignificant role in the economy.

1.4.17. Functions of Commercial Banks in India

The main functions of the commercial banks in India are stated below:

- (i) **Acceptance of deposits:** The principal function of any commercial bank is to accept deposits from different individuals and institutions. The commercial banks open an account against the name of a person or institution who deposits money with a commercial bank.

Generally, commercial banks keep three types of deposits:

- (a) Fixed or time deposits,
- (b) Savings deposits, and
- (c) Current deposits.

In case of **fixed deposits**, the depositors have to keep their money for a specified period of time with a commercial bank and earn a given rate of interest (per annum).

Sometimes, the commercial banks accept **recurring deposits**. In this case, a fixed amount of money is accepted in an equal interval (say, per month) and the accumulated sum (Principal plus interest) matures after a given time period (say, 5 years) as agreed upon with the customer.

On the other hand, **savings and current deposits** are called **demand deposits** because the depositors can withdraw money at any time from these accounts on demand. In case of current accounts (which is opened particularly against the name of any business firm or institution), the depositor does not get any interest on their deposits. However, the depositors get the 'overdraft' facilities (i.e., withdrawal of deposits in excess of the deposited amount) in case of current account. In case of savings account, though the depositors get interest on the deposited amount, interest is relatively less as compared to that in fixed deposits.

- (ii) **Providing loans:** Commercial banks also give short and medium-term loans to different individuals or institutions against some collateral securities or by mortgaging of some assets. Banks charge interest on such loans.

These loans can be divided into four categories:

- (a) **Ordinary loans:** In these cases, the commercial banks give loans for purchasing consumer durables for building 'own house', etc.
- (b) **Cash credit:** This type of loan is given to any business firm. The bank fixes certain 'credit limit' determined on the basis of the value of stocks/sales of that firm. The firm is allowed to withdraw money from its account within that credit limit.
- (c) **Overdraft facility:** In this case, the bank allows the depositor to withdraw money in excess of the deposited amount in its account.
- (d) **Discounting bill of exchange:** Commercial banks also give loans by rediscounting the bill of exchange submitted by the debtors for this purpose.

- (iii) **Credit creation:** Though the commercial banks cannot print money, they can create credit money through their loan-operations. In fact, demand deposits with a commercial bank is regarded as an important constituent of money supply in an economy, because people can draw cheque on such account and these cheques can be used like money for settling down different claims. Now, the commercial banking system, as a whole, plays an important role in such deposit creations by giving loans and, hence, they influence the money supply in an economy.

- (iv) **Agency functions:** Commercial banks also perform many functions as agents of their depositors (i.e., collection of cheques, dividend on shares, etc. of their depositors; payment for bills of exchange, insurance premium, etc. on behalf of its depositors, etc.). Commercial banks charge fees for providing such agency services. Further, the State Bank of India was entrusted with the task of functioning as an agent of the RBI. Hence, the SBI now receives and makes payments on behalf of the Central and State Governments.

- (v) **Helping international trade:** Commercial banks also help their customers, who are engaged in international trade. Some commercial banks are engaged in the purchase and sale of foreign exchange and these banks have foreign branches also. Hence, the customers can avail of these facilities. Export financing is considered to be a thrust area by the RBI, and it stipulates that commercial banks should finance exports to a minimum extent of 10 per cent of their total advances. In the case of foreign banks, lending towards the export sector is considered to be priority sector lending.

- (vi) **Supporting economic development:** In most of the developing countries, the role of commercial banks is very important in providing loans to the priority sectors (like small farmers, small businessmen, etc.) in expanding branches in rural areas, in plan-financing, etc. For example, in case of India, the nationalised commercial banks have performed these functions since 1969 and



have helped in fostering the economic development of India. For example, the share of private sector (e.g., small and marginal farmers, small entrepreneurs, etc.) lending to total advances of the public sector commercial banks in India was 14.6 per cent in June, 1969 and increased to 38.9 per cent in March, 1994. It was about 38.9 per cent in March, 2002.

Box-1

Special Agricultural Credit Plan by the Public Sector Banks

The public sector banks have been formulating Special Agricultural Credit Plans (SACP) since 1994-95 with a view to achieving distinct and marked improvement in the flow of credit to agriculture. Under SACP, the banks are required to fix self-set targets for achievement during the financial year. The targets fixed by banks show an increase of about 20 to 25 per cent over the disbursements made in the previous year. During the financial year 2007-08, against the target of ₹ 1,52,133 crore, disbursements in agriculture by public sector banks under the plan aggregated at ₹ 1,33,226 crore were only 87.6 per cent of the target. This contrasts with 2005-06 and 2006-07 when the target set was exceeded. Disbursements under the SACP by public sector banks during the last three years may be seen in Table-1.7.

Table-1.7
Credit to agriculture from public sector banks under SACP

Year	Target	Disbursements	Achievement of target (per cent)	Year-on-Year growth in disbursements (per cent)
2005-06	85,074	94,278	110.9	44.6
2006-07	1,18,140	1,22,443	103.6	29.9
2007-08	1,52,133	1,33,226	87.6	6.5

Source: RBI

- (7) **Functioning as a 'Lead Bank':** The 'Lead Bank' scheme was introduced in December, 1969. Under this scheme, each commercial bank is allotted a particular district where that commercial bank would take the lead in surveying the scope for the expansion of credit and making a 'credit plan' for the efficient utilisation of local resources. For example, the State Bank Group (the biggest commercial banking group in India) was allotted 69 districts. They were also supposed to bring about a co-ordination between the operations of co-operative banks, commercial banks and other financial institutions within respective districts.
- (8) **Helping in the implementation of development programmes:** During the plan periods, several development schemes of the Government in relation to poverty alleviation and employment generation have been financed through these public sector commercial banks. For example, the beneficiaries of Integrated Rural Development Programme (IRDP), Jawahar Rozgar Yojana (JRY), Prime Minister's Rozgar Yojana (PMRY), etc. received such financial support through different commercial banks.
- (9) **Carrying out credit control policies of the RBI:** The credit control policies of the RBI, either to contract or expand the process of credit creation, are particularly implemented through these public sector commercial banks. For example, to control inflationary pressures, the RBI may increase the bank rate (i.e., the rate at which it rediscounts the securities submitted by the



commercial banks while taking credit facilities from the RBI) and, therefore, the cost of borrowing capital increases in case of commercial banks. Hence, the lending rates also increase in commercial banks, and the investors are expected to invest less than before because they would borrow less from the commercial banks at higher rates of interest. With less investment, lesser employment and income opportunities would be created in the economy. This is likely to check excess demand conditions.

- (10) **Other functions:** Barring these functions, commercial banks also perform some other important functions. For example, they protect the valuable assets and documents of their customers by providing locker facilities. At present, commercial banks also perform some non-traditional functions. For example, the commercial banks in India are found to be engaged in providing the following services:
 - (a) **Internet banking:** It facilitates any account holder to operate his/her bank account through 'internet' by using the personal computer.
 - (b) **Anywhere banking or 'core banking solution':** Under this system, an account holder would get the facility of operating his/her account at any of the branches of his/her bank within the country (i.e., it includes the facilities of cash deposit, cash withdrawal, etc. at any branch of the said bank).
 - (c) **ATM facility:** The Automated teller machines (ATM) of the bank situated at different cities within the country can be used by the account holder having an ATM card. It allows the ATM card holder to withdraw cash at any time since the ATM remains operative for 24 hours in a day.
 - (d) **Issuing credit cards:** These cards facilitate the card holders (e.g., SBI credit card, HSBC credit card, etc.) to purchase goods and services from various shops (who accept such cards) without paying any cash at present. The card-issuing banks pay the seller immediately after the transaction but charge the buyer after 30 to 45 days.

Box-2

Technology Development in Indian Banks

The scheduled commercial banks in India incur large amounts of expenditure on computerisation, automation and development of communication network. The cumulative expenditure during September 1999 to March 2008 was ₹ 15,016 crore. These help in changing the image and outlook of banking sector significantly by improving the processes and procedures, rapid product development through alternative delivery channels, reduction in the transaction costs and thereby leading to higher productivity. The technology is also being leveraged to expand the banking outreach particularly to rural areas. The number of branches providing 'core banking services' (CBS) rose rapidly to 67.0 per cent as of end-March 2008 from 44.4 per cent at end-March 2007. The number of Automated Teller Machines (ATMs) at the end-March 2008 was 3,286 compared to 27,088 at end-March 2007. (Source: Economic Survey (2008-09) - Govt. of India)

- (e) **Venture capital financing:** The commercial banks create a venture capital fund to finance risky ventures of different business enterprises. The subsidiaries of SBI and Canara bank have taken such initiatives.
- (f) **Merchant banking:** Different commercial banks such as SBI, Canara Bank, Bank of Baroda, etc. have also merchant banking divisions. They help the business firms to sell their shares, promote their new projects, etc.



- (g) **Retail banking** : It refers to banking services such as housing loans, consumer durable loans (say, to purchase refrigerators, washing machines, etc.) car loans, educational loans, etc. (these are generally short and medium term loans).
- (h) **Mutual funds** : Some commercial banks accept the public deposit and use that fund to purchase shares of different companies in a prudent manner which is not possible for an individual investor. It reduces the risk of the individual investors. For example, the State Bank of India, Canara Bank, Punjab National Bank, Bank of India, etc. have created such mutual funds.
- (i) **Facilitating the account holders in share market transactions through 'demat' accounts** : The commercial banks also provide facilities to its account holders in the purchase and sale of shares of different companies through the opening of 'demat' account against their name (short form of 'dematerialised' account. Thus, material transactions of share certificates can be avoided so that the transactions become quicker and transparent.)

Box-3

The Prime Lending Rates (PLR) of the Commercial Banks

The PLR generally refers to that interest rate which is charged by the commercial banks while giving loans to the borrower having high credit worthiness (i.e. high repaying capabilities with minimum risk of loan recovery). So, the PLR can be considered as the minimum lending rate. This was introduced for the commercial banks of India in 1994. Since, April 2001, the PLR has been converted to a benchmark rate for commercial banks (i.e., a reference rate). Generally, the commercial banks charge interest rates either equal to or above the PLR while giving loans. The average PLR of the commercial banks was 15 per cent in 1994-95, and it gradually came down to 11.5 per cent in 2001-02. In April 2003, the Reserve Bank of India had advised the commercial banks to announce Benchmark PLR (BPLR) taking into account their operating expenses, credit risk etc. It has been found that BPLR is lower than the earlier PLR of different commercial banks.

Table-1.1

Branch Expansion of Commercial Banks in India during 1969-2019

Bank Group	No. of branch offices				Percentage of Rural Branches in 2019 (%)
	1969	1990	2014	2019	
1. Public Sector Banks	7,015	30,996	83,203	95,137	30.9
2. Regional Rural Banks	—	14,529	19,292	22,082	66.6
3. Private Sector Banks	900	1,672	21,078	31,431	23.9
4. Foreign Banks	137	141	322	299	1.3
5. Local Area Banks	—	—	19	87	12.4
6. Small Finance Banks	—	—	—	1,723	20.4
7. Payment Banks	—	—	—	150	9.0
8. Total Commercial Banks	8,202	46,198	1,22,530	1,48,974	36.2

Source : Economic Survey (Various Issues), Govt. of India



1.4.18. Role of Indian Commercial Banks

Banks are a vital part of any modern economic system. Indeed, it is unimaginable that an economy can function without banks. What is the role played by banks in the economic system?

- Encouraging savings** : People keep their savings in banks. This indicates in them the habit of saving. In primitive economic systems, where banks did not exist, people either did not save at all or saved very little. It is an observed fact that the spread of the banking system stimulates savings.
- Mobilisation of savings for investment** : Secondly, banks perform the vital role of mobilising the savings for the purpose of investment. A person living in a primitive society without banks may engage in a little bit of saving in order to cover the risk of unforeseen emergencies. But this saving will be kept either in his or her own house or kept with some businessman. If it is kept in the house, it is not used for any productive purpose. If it is kept with a businessman, the businessman can invest the money in his business but nobody else can make use of it. If it is kept with a money-lender, it can be lent out to other people. However, because of the high rates of interest usually charged by money-lenders, people do not usually approach them for business purposes. They approach them when personal emergencies arise. It is only banks which do the job of collecting the savings from the savers and lending them out to investors for productive purposes. Thus, banks perform a co-ordinating role between savings and investments.
- Acting as channels of Government's monetary policy** : It is the banks which act as the channels through which the Government puts its monetary policies into practice. For instance, when there is a recession in the market, the Government (or the monetary authority) wants the rate of interest to come down and credit to be given to producers more liberally. However, these objectives can be achieved mainly through banks. It is the banks which have to lower the interest rates and expand credit. Similarly, at times of inflation, the interest rates are sought to be raised and credit is sought to be limited. But such objectives can be achieved only if banks adopt the appropriate policies.
- Raising the rate of economic growth** : In a less developed economy like India, one of the major objectives of economic policy is to raise the rate of economic growth. Here also, the banks play a vital role. By ensuring that loans are given to productive (rather than speculative) activities, banks can ensure that the rate of growth of production (and, hence, the rate of growth of national income) is boosted. Thus, the credit creation function of the commercial banks benefits the economy to a large extent.
- Extension of the size of market** : Size of the market for different goods and services depends on the demand for those goods and services. Credit operations of the commercial banks create income opportunities within an economy. Higher income means greater purchasing power and increased demand for various goods and services within an economy. Again, the traders and businessmen are encouraged to send their merchandise at far off markets on the basis of bank guarantees. In this way, the commercial banks help in expanding the size of the market.
- Facilitating foreign trade** : The commercial banks also extend credit facilities to the exporters on easy terms. As a result, different firms can use these credit facilities for importing capital goods or raw materials needed for export promotion. Thus, commercial banks play a crucial role in promoting new ventures and entrepreneurship in the fields of foreign trade.



- (7) Raising employment opportunities and reducing income inequalities: Growth may not be the only objective of Government policy. There may be other objectives. For instance, in countries with a high level of unemployment, the Government may want to help those sectors of the economy with a high employment potential. Again, it is a bank, which can ensure the success of such policies by directing their credit flows towards these sectors. Similarly, the Government may have the objective of reducing the inequality of income distribution in society. Banks can help in the achievement of this objective by extending credit to the poorer sections of society at specially low rates of interest. In this way, it can be shown that banks can help the Government in achieving almost every objective of planned economic development.

Thus, we see that the commercial banks play a vital role in any modern economic system and, in particular, in a less developed economy like India.

1.5. Expansion of Banking Service in India since 1991 & Problem of NPA

Since 1991, the government of India took a liberal attitude towards the entry of private sector banking organisations in the Indian financial market. As a result, the number of foreign commercial banks and the scheduled private commercial banks have increased in India during the post-reform period. Table-1.9 suggests that the number of branch offices of the public sector banks in India was only about 7,015 in 1989 and this number increased to about 78,615 in 2011. It has been observed that during the post-reform period (say, during 1995-2011), the branch offices of public sector banks have increased by about 38 per cent. However, the branch offices of foreign banks have increased by about 125 per cent, and those of private sector banks have increased by about 200 per cent during the same period [Table-1.9].

Table-1.9
Branch Expansion of Commercial Banks in India during 1989-2011

Bank Group	No. of offices as on June 30				No. of offices as on June 31, 2011	Percentage of Rural Branches (%) (in June 2011)
	1989	1993	1995	1997		
1. SBI & Associates	2,462	12,436	12,770	13,012	17,878	54.7
2. Nationalised Banks	4,355	30,013	30,792	31,440	46,862	31.9
3. Regional Rural Banks	—	14,529	14,556	14,405	15,777	75.3
4. Total Public Sector Banks (1 + 2 + 3)	7,015	56,988	58,068	58,857	78,615	40.3
5. Other Indian Scheduled Commercial Banks	90	3,872	4,090	4,420	11,042	11.3
6. Foreign Banks	130	141	156	189	318	2.2
7. All Scheduled Commercial Banks (4 + 5 + 6)	1,045	61,211	62,314	63,466	90,775	52.2
8. Non-Scheduled Commercial Banks	217	48	32	7	25	26.1
8. Total Commercial Banks (7 + 8)	8,262	61,899	62,346	63,473	90,800	37.2

Source: Economic Survey (Government of India), 2011-12.



• The Problem of NPAs in commercial banks :

As the name suggests, an asset becomes Non-Performing when it stops generating any further income for the bank. Earlier an asset was considered as a Non-Performing asset based on the concept of "past due". An NPA was defined as credit in respect of which interest and/or installment of principal has remained "past due" for a specific period of time. An amount is considered as past due, when it remains outstanding for 30 days beyond the due date. However, with effect from March 31, 2001 the "past due" concept has been dispensed with and the period is reckoned from the due date of payment. With an intention to use the international best practice and to ensure greater transparency, "90 days" overdue norms are accepted for the identification of NPA from the year ended March 31, 2004.

With effect from March 31, 2004, a NFA has been counted on loan and advances where:

- Interest and/or installment of principal remain overdue for a period of more than 90 days in respect of a term loan.
- The account remains out of order for a period of 90 days, in respect of an Overdraft/Cash Credit.
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted.
- Any amount to be received remains overdue for a period of more than 90 days in respect of any other accounts.

Let us now explain each of the types of assets with respect to bank Advances as follows :

- Standard Assets :** Standard assets are those which do not carry any problems and which do not carry more than normal risk attached to the business. Such assets should not be an NPA.
- Sub-standard Assets :** These assets (with respect to the norms of March 31, 2005) are those which remained NPA for a period less than or equal to 12 months.
- Doubtful Assets :** In respect to the norms of March 31, 2005 an asset is required to be classified as doubtful, if it has remained NPA for more than 12 months. A loan which is classified as doubtful has all the weaknesses inherent as that classified as Sub-standard with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of the currently known facts, conditions and values, highly questionable and improbable.
- Loss Assets :** A loss asset is one where loss has been identified by the bank or internal or external auditors or by the RBI inspection but the amount has not been written off, wholly or partly.

• **Types of NPA :** The NPAs are of two types : (a) Gross NPA and (b) Net NPA.

Gross NPAs are the sum total of all loan assets that are classified as NPAs as per RBI guidelines as on Balance Sheet date. It can be calculated with the help of following ratio:

$$\text{Gross NPA Ratio} = \frac{\text{Gross NPAs}}{\text{Gross Advances}}$$

Net NPAs are those type of NPAs in which the bank has deducted the provision regarding NPAs. Thus, Net NPA = Gross NPA - Provisions. The Net NPA ratio can be calculated using the following formula (It is to be noted that every bank has to keep aside certain proportion of its income generated from that asset as provision for impending loss) :

$$\text{Net NPA Ratio} = \frac{\text{Gross NPAs} - \text{Provisions}}{\text{Gross Advances} - \text{Provisions}}$$



Table-L.10

Movement of Gross NPA (as % of Gross Advance) during 1996-2017 in Public Sector Banks (PSB) and New Private Sector Banks (NPVTB)

Year	Gross NPA as % of Gross Advance		Year	Gross NPA as % of Gross Advance	
	PSB	NPVTB		PSB	NPVTB
1996-97	17.8	2.6	2007-08	2.2	1.1
1997-98	16.0	3.5	2008-09	2.0	2.9
1998-99	15.9	6.2	2009-10	3.3	3
1999-00	14.0	4.1	2010-11	2.3	2.5
2000-01	12.4	5.1	2011-12	3.2	2.1
2001-02	11.1	6.9	2012-13	3.6	1.8
2002-03	9.4	7.6	2013-14	4.4	1.6
2003-04	7.8	5.0	2014-15	5.0	2.1
2004-05	5.5	3.6	2015-16	9.3	2.8
2005-06	3.7	2.4	2016-17	11.7	4.1
2006-07	2.7	2.2			

Source: RBI

Fig-1.8: Line Diagram Showing the Movements of GNPA (as % of Gross Advance)

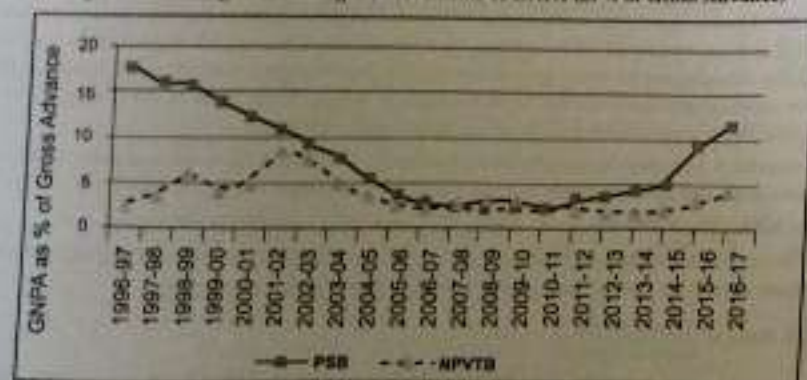


Table-L.10 and Fig-1.8 suggest that during mid-1990s, the Gross NPA (as a % of gross advance) of the public sector commercial banks (PSBs) in India remained as high as 17.8%. In case of new private sector commercial banks (NPVTBs) this percentage was comparatively low (only 2.6%) at that time. However, 1996-2002, we find two opposing trends, viz., while the Gross NPA (as % of gross advance) was gradually falling in PSBs, this was rising in case of NPVTBs. During, 2002-07, both PSBs and NPVTBs experienced a gradual decline in this respect. However, during 2010-17, the Gross NPA (as a % of gross advance) with the PSBs again indicated a rising trend. The NPVTBs experienced the same trend during 2014-17. The Reserve Bank of India report (Statistical Handbook) shows that in 1996-97



the amount of Gross NPA with the scheduled commercial banks was to the tune of about ₹ 3,037 billion and this figure had increased to ₹ 84,767 billion in 2016-17. The PSBs had a major share in total NPAs. The amount of Gross NPA with the PSBs increased from about ₹ 2,442 billion to ₹ 58,664 billion during that period. So far as the Net NPA (as % of Net Advance) is concerned, we find the same trend for PSBs and NPVTBs during 1996-2017 as observed in case of Gross NPAs (Table-L.11 and Fig-1.9). The RBI, in its Financial Stability Report (2018), has shown that the scheduled commercial banks' Gross NPA ratio may rise from 11.6 per cent in March 2018 to 12.2 per cent by March 2019. The PSBs which are particularly suffering from such stressed assets are: IDBI Bank, UCO Bank, Central Bank of India, Bank of India, Indian Overseas Bank, Dena Bank, Oriental Bank of Commerce, Bank of Maharashtra, United Bank of India, Corporation Bank and Allahabad Bank.

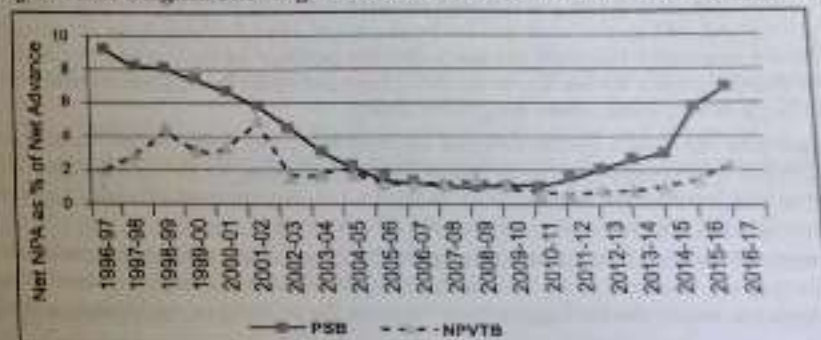
Table-L.11

Movement of Net NPA (as % of Net Advance) during 1996-2017 in Public Sector Banks (PSB) and New Private Sector Banks (NPVTB)

Year	Net NPA (as % of Net Advance)		Year	Net NPA (as % of Net Advance)	
	PSB	NPVTB		PSB	NPVTB
1996-97	9.2	2.0	2000-01	6.7	3.1
1997-98	8.2	2.6	2001-02	5.8	4.9
1998-99	8.1	4.5	2002-03	4.5	1.5
1999-00	7.4	2.9	2003-04	3.1	1.7
2000-01	2.1	1.9	2011-12	1.5	0.5
2005-06	1.3	1.0	2012-13	2.0	0.5
2006-07	1.1	1.0	2013-14	2.6	0.7
2007-08	1.0	1.1	2014-15	2.9	0.9
2008-09	0.9	1.3	2015-16	5.7	1.4
2009-10	1.1	1.0	2016-17	6.9	2.2
2010-11	1.1	0.6			

Source: RBI

Fig-1.9: Line Diagram Showing the Movements of Net NPA (as % of Net Advance)





1.5.1. Reasons for rising NPA

There can be numerous reasons for rising NPAs such as global slowdown, impact of global crisis on Indian economy in terms of a fall in domestic demand etc. However, pertaining to the banking sector, there are certain other issues that cater to the rise of NPAs. These are as follows:

- Willful defaulters, fraud, mismanagement and misappropriation of funds.
- Deficiencies on the part of bank viz., in credit appraisal and follow up actions, wrong identification of a borrower etc.
- Under-financing of a project.
- Delay in completing the project or wrong selection of a project.
- Business failures.
- Government policy of financing the large-scale infrastructure projects by the commercial banks (instead of development finance institutions).
- Government policy towards priority sector lending etc.

Let us now discuss some of these reasons:

- Business slowdown:** Between early 2000s and 2007 Indian economy was in the boom phase. During this period banks, especially public sector banks, lent extensively to corporate sector. However, the profits of most of the corporate houses dwindled due to slowdown in the global economy. Business slowdown and recessionary situations both within the domestic and global economy thus affected the profitability of the corporate sector. For instance, iron and steel sector of India performed badly during global slowdown (2007-09) and could not recover completely after 2008-09 global financial crisis. Further, due to sluggish off-take by Indian consumers and lack of appetite from Chinese market meant that the iron and steel industries became the worst performing industry during 2008-11. Hence, these industries failed to repay their outstanding loans with the commercial banks leading to an increase in NPAs.
- Delay in executing projects:** Similarly, the infrastructure industry, construction industry, heavy engineering industry etc. are such industries where a delay in execution of the project can make the project economically unviable. Many projects could not also be started in time for getting clearances i.e., environmental, local bodies etc. The ban in mining projects and delay in environmental related permits affected power projects and iron and steel sector in India.
- Volatility in input prices and long gestation lag:** In addition, volatility in prices of raw material and the shortage in availability of power have impacted the performance of the corporate sector. The gestation lag (i.e. time gap between the investment and the return on investment) in infrastructure projects is huge and they often fail to repay the first installment of the loan within, say, 90 days of the sanctioning of the loan causing the asset with the lending commercial bank as Non-Performing. When the commercial banks are to lend to these large infrastructure projects, there arises a mismatch between the asset-liability position of the banks since most of the savings and time deposits with the banks create short term liabilities but the asset created out of the loans given to large enterprises create long-term assets.
- Indiscriminate lending:** Indiscriminate lending by some state-owned banks during the high growth period is also supposed to be one of the main reasons for the deterioration in asset quality. Sometimes the banks find it less costly to provide a big amount of loan to a single enterprise rather than giving the same amount to, say, 10 borrowers.
- Priority sector lending:** Sometimes it is argued that the weaker sectors covered under the priority sector lending are the ones to be blamed for this situation. However, it is not the case. The NPAs in the corporate sector are far higher than those in the priority or agriculture sector. The concept



of priority sector officially came into picture in 1972 based on recommendations of the National Credit Council which emphasized that there should be a larger involvement of the commercial banks in the priority sector. In 1974, the banks were given a target of 33-33% as share of the priority sector in the total bank credit. Later this rate was revised to 40%. The RBI has segregated the priority sector into categories like agriculture, small-scale industries, small businesses, state sponsored organizations for SC/ST people, education loan, housing loan, consumption loan, micro credit, loans to software industry, food and agro processing sector, etc.

- Greedy banks and greedy consumers:** Sometimes many banks extend credit in risky ventures without proper appraisal of the schemes or projects in which they extend such credit. With the expansion of realty sector, some of the people also find it profitable to purchase multiple flats in different names just to earn a windfall return. In all such cases, the market uncertainties can lead to a fall in the asset value thereby making the assets with the banks as Non-Performing.

1.5.2. Impact of NPA on Commercial Banks

The NPAs directly affect the profitability of the banks. We can now indicate the ways through which the profitability of the banks can be affected:

- Liquidity position:** The NPAs affect the liquidity position of the lending banks, and results in a mismatch between their assets and liabilities, thereby forcing the banks to raise resources at higher cost.
- Undermine the image and goodwill of the lending banks:** High level of NPAs lowers the image and goodwill of the lending banks both in domestic and global markets. This reduces the market value of the equities of these banks and ultimately leads to lower profitability.
- Effect on the flow of credit:** Increasing level of NPAs in banks results in scarcity of funds in the Indian capital market as there will be only few banking institutions who will be ready to lend particularly in risky ventures.
- Higher cost of capital:** High level of NPAs also result in increasing the cost of capital as banks would be required to keep aside more funds as provisions for stressed assets as per the prudential norms for the smooth running of its operations.
- Risk-bearing capacity of banks:** The growing NPAs will also affect the risk-bearing capacity of the banks.
- Effect on income:** The NPAs reduce the net interest income of the lending banks as interest is not charged to these accounts. It reduces the earning capacity of the assets of the lending banks thereby negatively affecting the return on investment.
- Declining productivity:** The growing NPAs will also cost in terms of time, money and manpower which will ultimately result in declining profitability. This is because the bank staffs are to be primarily engaged in preparing papers for filing law cases to recover principal amount and interest in connection with NPAs rather than devoting time for planning mobilization of funds.
- Ultimate burden upon the society:** This problem will ultimately affect the common people of the society since lesser flow of credit from the banking sector (which is suffering from NPAs) would mean lower investment and employment opportunities in the economy.

1.5.2. Banking Sector Reforms in India: Recommendations of Narasimham Committee

To improve the profitability and economic strength of these commercial banks, the Government of India appointed a committee under the chairmanship of M. Narasimham, the former Governor of the RBI and this committee submitted its report in 1991. According to this committee, low profitability of public sector banks might be for two reasons:

- Increasing cost of operations;
- Declining interest-income of the banks.



To make these commercial banks more economically viable, this committee suggested some

- There should be less control of the RBI over commercial banks.
- Statutory Liquidity Ratio (SLR) should be reduced from 38.5 per cent to 25 per cent.
- Banks should get more freedom to fix minimum lending rates of interest.
- Credit to priority sectors should be reduced from 40 per cent to 10 per cent of total credit.
- The DRI (Differential Rates of Interest) scheme should be withdrawn.
- The number of nationalised banks should be reduced to ten only.
- Local banks are to be established to meet local needs.
- Non-profitable branches should be closed down.
- More foreign banks are to be allowed to enter into the money market, which will create a competitive environment in the financial sector of the economy.

Some of these suggestions have already been implemented by the Government of India and emphasis has been given on the diversification of banking activities.

■ **Report of the Second Narasimham Committee:** A high level committee under the chairmanship of M. Narasimham, was constituted by the Government of India in December, 1997 to review the record of implementation of financial sector reforms recommended by the first Narasimham Committee in 1991, and chalk out the reforms necessary in the years ahead to make the banking system stronger and better equipped to compete effectively in the international economic environment. The committee has submitted its report in April, 1998.

Some of the major recommendations of this committee are as follows:

- Relatively weak and unviable banks should be closed, and relatively strong banks should be merged with other banks or financial institutions.
- The country should have two or three banks with international orientations, eight or ten national banks and a large number of local banks. The first and second tier banks should take care of the needs of the corporate sector, and the banks in the third tier (i.e., local banks) should be confined to smaller geographical regions. (So, there should be 3 stages in banking structure).
- The ratio of capital to risky assets of a bank should be at least 10 per cent (it is known as capital adequacy norm).
- Legal framework should be strengthened for credit recovery.
- The net non-performing assets for all banks should be brought down to below 5 per cent by the year 2000 and to 3 per cent by 2002.
- There should be rationalisation of branches and staff.
- The policy of licensing new private banks may be continued.

■ **Recommendations of the Working Group on Restructuring of Weak Public Sector banks:** Keeping in view the need to revive the weak public sector commercial banks, the Reserve Bank of India set up a Working Group in February, 1999 under the chairmanship of M.S. Verma to suggest measures for the revival of weak public sector banks in India. The working Group submitted its report in October, 1999. This Group has emphasised on three particular aspects of a bank, viz. the solvency, the earning capacity and the profitability of a bank.

The Working Group has identified three weak banks, viz., Indian Bank, UCO Bank and the United Bank of India. The recommendations of this Working Group include restructuring of weak banks in two stages: (a) The first stage involves operational, organisational and financial restructuring aimed at restoring competitive efficiency; and (b) the second stage covers options of privatisation and/or merger with other bank.



15.4. Control of NPA and Prudential Norms

Most of the Central Banks throughout the globe at present are to follow the prudential norms or Basel norms to overcome the problem of NPAs. Basel is a city in Switzerland. It is the headquarters of the Bureau of International Settlement (BIS), which fosters cooperation among central banks with a common goal of financial stability and common standards of banking regulations.

Basel guidelines refer to broad supervisory standards formulated by the groups of Central Banks — called as the Basel Committee on Banking Supervision (BCBS). The set of the agreement by the BCBS, which mainly focuses on risks to banks and the financial system, is called **Basel Accords/Basel Norms**. The purpose of the accord is to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses. India has also accepted Basel Norms for Banking.

In 1988, BCBS introduced capital measurement system called Basel capital accord, also called **Basel-I**. It focused almost entirely on credit risk. The minimum capital requirement for banks was fixed at 8% of risk-weighted assets (called as CRAR or Capital to Risk Weighted Asset Ratio as noted below). India adopted Basel-I guidelines in 1999.

$$\text{CRAR} = \frac{\text{Net Worth of Banks}}{\text{Total Risk Weighted Assets}}$$

$$= \frac{\text{Equity Capital} + \text{reserves} + \text{Surplus}}{\text{Total Risk Weighted Assets}}$$

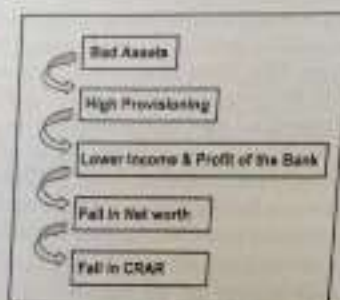
In 2004, **Basel-II** guidelines were published by BCBS, which were considered to be the refined and framed versions of Basel-I accord. In India, the RBI has implemented the Basel-II norms on 31 March 2009.

Some of the prudential norms followed by the Indian banking institutions are as follows:

- Provisioning:** It means a portion of the income generated from any asset is kept aside as a provision for an impending loss.
- Income Recognition:** According to this norm, if income (interest income) is not generated from any asset during the stipulated time period, then that income cannot be shown in the Balance Sheet.
- Asset Classification:** Assets are to be classified base on their relative riskiness (already discussed).
- Capital Adequacy Norm:** It was prescribed by the Basel Committee on Banking Supervision (BCBS). It implies that institutions with higher risk profile should maintain higher levels of capital. The BCBS classifies capital of the banking institutions into two broad categories: Tier-I and Tier-II capital. The Tier-I capital consists of share capital and disclosed reserves, and the Tier-II capital consists of undisclosed and latent reserves, general provisions, hybrid capital and subordinated debt. The BCBS recommended that Tier-II capital should not exceed Tier-I capital. These Tier-I and II capital together must be at least equal to 9 per cent of the risk-weighted assets of the commercial banks after applying the risk-weighting co-efficient to the assets.

Thus, with an increase in stressed or bad assets, such provisioning norms led to a fall in the profitability of the commercial banks. Hence, the net worth of the bank would fall causing a fall in CRAR. So, to maintain the CRAR level, a bank must be cautious in restricting its bad assets.

From the Concept of CRAR and Provisioning, we thus find:



Basel-III norms have been released in December 2010 and this accord is the third in the series of Accords. In India, lenders have to adhere to these regulations from March 2019. Basel-III accords emphasise on:

- Better Capital Quality:** One of the key elements of Basel-III is the introduction of a much strict definition of capital. Better quality capital means the higher loss-absorbing capacity.
- Capital Conservation Buffer:** Another key feature of Basel-III is that now banks will be required to hold a capital conservation buffer of 2.5%. The aim of adding to build conservation buffer is to ensure that banks maintain a cushion of capital that can be used to absorb losses during periods of financial and economic stress.
- Countercyclical Buffer:** This is also one of the key elements of Basel-III. The countercyclical buffer has been introduced with the objective to increase capital requirements in good times (during boom period) and decrease the same in bad times (during recessionary period).
- Minimum Common Equity and Tier-I Capital Requirements:** The minimum requirement for common equity, the highest form of loss-absorbing capital, has been raised under Basel-III from 2% to 4.5% of total risk-weighted assets.
- Leverage Ratio:** A review of the financial crisis of 2008 has indicated that the value of many assets fell quicker than assumed from historical experience. Thus, now Basel-III rules include a leverage ratio to serve as a safety net. A leverage ratio is a relative amount of capital to total assets (not risk-weighted). This aims to put a cap on swelling of leverage in the banking sector on a global basis. To begin with 3% leverage ratio of Tier-I capital of any bank has been set.

Corporate Debt Restructuring (CDR) system: The Corporate Debt Restructuring (CDR) system was formed by the RBI in 2001 to restructure corporate debt outside the purview of debt recovery tribunals (DRT) and the Board for Industrial and Financial Reconstruction (BIFR). The CDR is a Non-statutory mechanism. It is a voluntary system based on debtor-creditor agreement and inter-creditor agreement. This mechanism covered only multiple banking accounts/syndication/consortium accounts with outstanding exposure of ₹ 20 crore and above by banks and institutions (When different banks jointly give a loan, it is called as loan syndication). This system is applicable only to standard and sub-standard accounts. The objective of the CDR framework is to ensure timely and transparent medium for restructuring of the corporate debts of viable entities (say, the corporate borrowers) facing problems. Its three-tier structure consisted of CDR Standing Forum, CDR Empowered Group and CDR Cell. The Standing Forum was responsible for laying down all policies and guidelines related to debt restructuring, while the CDR cell was responsible for scrutinizing all restructuring proposals from borrowers and lenders. The final decision on approving the restructuring package was taken by



the CDR Empowered Group. Under the CDR cell rules, at least 75% of creditors (by value) [and at least 60% creditors by number] should approve the resolution plan, which would make it binding on the remaining 25%. According to the latest available data, the CDR cell has approved restructuring of stressed loans worth ₹ 4 trillion since its inception in 2001. Of this, ₹ 84,677 crore worth of loans exited the CDR cell successfully and ₹ 1.84 trillion exited without success.

The SARFAESI Act: The Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002 (SARFAESI Act) has also been passed by the government of India to solve this problem. It allows banks and other financial institutions to auction residential or commercial properties to recover loans. The first asset reconstruction company (ARC) of India, ARCL, was set up under this act. An ARC acquires bad loans from banks and financial institutions, usually at a discount, and works to recover them through a variety of measures, including sale of assets or a turnaround around by professional management. Relieved of their NPA burden, the banks can focus on their core activity of lending.

Formation of Joint Lenders' Forum (JLF): In 2014, the RBI instructed the lending banks to form a JLF whenever the principal and interest on an account fell overdue between 1 to less than 3 months, and when the aggregate exposure (AE) [fund based and non-fund based taken together] of lenders in that account was ₹ 1000 million and above. However, the lenders also had the option of forming a JLF even when the AE in an account was less than ₹ 1000 million and/or when the account was reported as 'Special Mention Account' (SMA) with principal and interest falling overdue between 1 to less than 3 months. This JLF was advised to take some Corrective Action Plans (CAP). The CAP includes: (i) **Reconciliation:** It implies a step of obtaining a specific commitment from the borrower to regularise the account so that the account comes out of SMA status or does not slip into the NPA category; (ii) **Restructuring:** This step considers the possibility of restructuring the account if it is *prima facie* viable and the borrower is not a willful defaulter, i.e., there is no diversion of funds, fraud or embezzlement, etc. (iii) **Recovery:** Once the first two options at (i) and (ii) above are seen as not feasible, the recovery process may be resorted to. The JLF may decide the best recovery process to be followed, among the various legal and other recovery options available, with a view to optimising realises and results. The decisions agreed upon by a minimum of 75% of creditors by value and 60% of creditors by number in the JLF would be considered as the basis for proceeding with the restructuring of the account, and will be binding on all lenders under the terms of the agreement between the borrowers and the lending institutions.

Strategic Debt Restructuring (SDR): This scheme was introduced by the RBI in 2015 by converting loan overdue to equity shares. At the time of initial restructuring, the Joint Lenders' Forum (JLF) of the lending banks must incorporate, in the terms and conditions attached to the restructured loan/s agreed with the borrower, an option to convert the entire loan (including unpaid interest), or part thereof into shares in the company in the event the borrower is not able to achieve the viability milestones and/or adhere to 'critical conditions' as stipulated in the restructuring package. This should be supported by necessary approvals/authorisations (including special resolution by the shareholders) from the borrower company.

Scheme for Sustainable Structuring of Stressed Assets' (S4A): The Reserve Bank introduced this scheme in June 2016. This scheme was introduced as an optional framework for the resolution of distressed accounts. The S4A envisages determination of the sustainable debt level for a stressed borrower, and bifurcation of the outstanding debt into sustainable debt and equity/quasi-equity securities which are expected to provide upside to the lenders when the borrower turns around.

The Insolvency and Bankruptcy Code, 2016 (IBC): The IBC is the bankruptcy law of India which aims to consolidate the existing framework by creating a single law for insolvency and bankruptcy. The Insolvency and Bankruptcy Code, 2015 was introduced in Lok Sabha in December 2015. This bankruptcy code is a one stop solution for resolving insolvencies which at present is a long process

and does not offer an economically viable arrangement. A strong insolvency framework, where the cost and the time incurred in attaining liquidation has been long overdue in India, will be able to protect the interests of small investors and make the process of doing business less cumbersome process. The principal features of the IBC are as follows:

- Insolvency Resolution:** The Code outlines separate insolvency resolution process for individuals, companies and partnership firms. The process may be initiated by either the debtor or the creditors. A maximum time limit for completion of the insolvency resolution process has been set for corporate houses and individuals. For companies, the process will have to be completed within 180 days, which may be extended by 90 days, if a majority of the creditors agree. For start-ups (other than partnership firms), small companies and other companies with asset less than ₹ 1 crore, resolution process would be completed within 90 days of initiation. Request which may be extended by 45 days.
- Insolvency regulator:** The Code establishes the Insolvency and Bankruptcy Board of India to oversee the insolvency proceedings in the country and regulate the entities regulated under the Code. The Board will have 10 members, including representatives from the Ministries of Finance and Law, and the Reserve Bank of India.
- Insolvency professionals:** The insolvency process will be managed by licensed professionals. These professionals will also control the assets of the debtor during the insolvency process.
- Bankruptcy and Insolvency Adjudicator:** The Code proposes two separate tribunals to oversee the process of insolvency resolution, for individuals and companies: (i) the National Company Law Tribunal (NCLT) has been formed under the Companies Act 2013 for Companies and Limited Liability Partnership firms and (ii) the Debt Recovery Tribunal for individuals and partnership firms.

Prompt Corrective Action (PCA): The RBI has also introduced the PCA in April 2007 for the banks suffering from NPAs. According to this scheme, the RBI has indicated some risk threshold levels for the lending banks based on their CRAR, asset quality, profitability etc. For instance, the bank would fall under the risk threshold level-1: (i) if the CRAR along with capital conservation buffer (of 2.5% of Tier-I capital) is greater than 7.75% but less than 10.25%; (ii) if its Net NPA (as % of net advanced assets) is greater than 6% but less than 9%; (iii) if its profit after tax as percentage of average total assets (i.e. Return on Assets) remains negative for two consecutive years etc. Any further deterioration in these three items would make the bank under the risk threshold level-2 or 3. As a part of the PCA, the banks under risk threshold level-1, should restrict its dividend payments. Similarly, the banks under risk threshold level-2, should restrict its branch expansion policy.

The RBI on 12 February, 2014 has withdrawn all existing debt restructuring schemes which included the CDR scheme, strategic debt restructuring (SDR) scheme and scheme for sustainable restructuring of stressed assets (SAR) and they have been replaced by the IBC. The RBI has asked all banks to initiate resolution plans as soon as a corporate default happens, and refer the same for bankruptcy proceedings in the event of a failure in restructuring.

It is hoped that with the introduction of these steps, the problem of NPA with the commercial banks can be resolved to a great extent.

1.5.5. Financial Sector Reform in India

The policies of the government of India regarding financial sector reforms since early 1990s aimed at upgrading the prudential and regulatory standards in the banking system, to meet the international standards. One of the principal objectives of this reform policy was to shift the role of the Reserve Bank of India from a 'regulator' to a 'facilitator' of the financial sector in India.

Other objectives of this financial reform policy were: (i) to make Indian financial sector more competitive and efficient; (ii) to allow the private and foreign banking institutions to enter into the



financial sector of India more freely; (iii) to improve the quality of banking service and (iv) to make banking institutions more viable through an increase in their profits through better risk management or fund management. While framing this financial sector reform policy, the government followed the reports of the 'Committee on the Financial System' (1991) and the 'Committee on Banking Sector Reforms' (1998) under the chairmanship of Mr. M. Narasimham. These policies emphasised the following issues:

- Gradual reduction in RBI's control over the Indian banking system and give operational freedom to the commercial banks:** The rate of interest on loans given by any commercial bank had been fully decontrolled. The commercial banks were also allowed to set interest rates on term deposits of maturity over 90 days. Thus, the interest rate structure, which was previously administered by the RBI, began to be determined by market forces of supply and demand for fundable funds. On the other hand, the statutory reserves to be maintained by the commercial banks with the RBI were also reduced. As a result, the SLR or the Statutory Liquidity Ratio was reduced from 38.5 per cent to 20 per cent (i.e. previously any commercial bank had to keep 38.5 per cent of its liquid assets as reserve with the RBI, this restriction reduced their capacity to give loans or investment in different sectors. The assets which can easily be converted into cash are considered as liquid assets.)
- Entry of private and foreign banks in the Indian banking sector to create a competitive environment and allowance of foreign investment in the Indian banking sector:** The foreign commercial banks like ABN Amro, American Express, etc. were allowed to operate in India; foreign investment in the Indian banking sector was liberalised by raising the FDI limit in private sector banks to 74 per cent of the paid up capital including the investment by FDI.
- Modernising the payments system in the banking sector:** Some modernised payments mechanism like the use of internet service and computers to facilitate the use of debit cards/ ATM cards, electronic fund transfer, Real Time Gross Settlement or RTGS method for quick settlement of inter-bank transactions, etc. were introduced in the banking sector.
- Maintenance of some prudential norm or capital adequacy norm:** The capital adequacy norm is expressed in terms of the Capital to Risk-weighted Assets Ratio or CRAR. The assets of the commercial banks had to be categorized in terms of their relative riskiness and the banks had to maintain a CRAR of at least 9 per cent to guard them against the possible market risks. The simple objective was to make the banking organizations more prudent in their asset-liability management to avoid some unnecessary market risks. These prudential norms were adopted on the basis of the recommendations of 'Basel Committee' formed by the governors of the Central banks of different countries.
- Improvement in the operational efficiency of weak public sector banks:** The operational efficiency of some loss-making public sector banks (such as United Bank of India, Indian Bank, etc.) had to be improved by reducing their operational costs and by reducing their Non-Performing Assets or NPAs. If any loan given by the bank cannot be recovered along with interest within a stipulated time period then it is considered as a NPA for the bank. Generally, if equitably instalment (EMI) is not deposited by the borrower consecutively for 90 days, then the asset is considered to be NPA for any bank. Thus, the loan amount, which is considered as an asset by the lending bank, becomes NPA when it does not generate any interest income. The government of India enacted Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002 to enable the commercial banks to recover their dues without intervention of courts and tribunals.
- Entry of private institutions in the insurance sector:** We have already shown that in the field of insurance service, different foreign companies were allowed to enter into the Indian insurance sector through collaboration with some Indian companies. However, the Insurance Regulatory

and Development Authority (RDA) was established in 2000 by the government to regulate the activities.

(b) Hiving off the supervisory function of the RBI from its regulatory function: The Financial Supervision was established under the RBI in 1994 bifurcating the regulatory and supervisory functions of the RBI.

It was believed that these reform policies would make Indian banking system more efficient enough competitive strength. Again, during 1990s, the Government of India adopted some measures to improve the operation and structure of the Indian capital market. The Government set up the following institutions to promote safety, transparency and efficiency of the capital market: (a) The Securities and Exchange Board of India (SEBI), (b) The National Stock Exchange (NSE), (c) The National Securities Depository Ltd. (NSDL), (d) The National Securities Clearing Corporation (NSCC), (e) The Clearing Corporation of India Ltd (CCIL), etc. Further, for the quick settlement of purchase and sale of shares, the 'rolling settlement' method has been introduced. As a result, market transactions increased in India to a great extent during 1999-2007.

It has been observed that these reform measures also led to an increase in the profitability of the public sector commercial banks in India and a decline in their NPAs (as a % of their credit or loan). On the other hand, the CRAR indicated an increasing trend for these banks (Table - 1.12) particularly during 2000-12.

Table - 1.12

Indicators of Performance of the Public Sector Commercial Banks in India

Indicator	1997-98	1999-00	2000-01	2004-05	2011-12
(a) Net profit (as a % of total assets)	0.77	0.57	0.42	0.09	0.55
(b) Gross NPA (as a % Gross Advance)	18.02	13.96	12.34	5.7	3.3
(c) CRAR (%)	11.13	11.6	10.7	12.4	23.23

Source: Report Trend and Progress of Banking in India (General Issues), Reserve Bank of India.

1.5.6. Argument for and against such reform

We have already seen that reforms in the Indian financial sector particularly signify reforms in the banking sector.

In our previous discussion, we have already stated different arguments in favour of nationalisation of commercial banks in India. However, keeping in consonance with the marketise approach towards economic growth undertaken by the Government of India since 1991, as well as keeping in view of the poor performance of nationalised banks, the banking sector reform policies of the Government, as reflected in the recommendations of the Narasimham Committee, emphasised lesser intervention of the RBI in the credit decisions and lending operations of commercial banks. The report also stressed on reducing the number of public sector banks in India. Foreign private banks were also allowed to enter into the Indian money market more freely. Hence, all these aspects of the present reform policies signify a move towards privatisation of commercial banks. The Government, in its recent banking and insurance policy (in its Insurance Regulation and Development Bill, 1999), has further stressed the need for the participation of foreign banking and insurance companies in the Indian money market. The report of the Working Group (1995) on Restructuring Weak Public Sector Banks, under the chairmanship of M. S. Venna (Venna Committee), has also emphasised the need for



a drastic reform in the operations of three weak public sector banks viz., the United Bank of India, United Commercial Bank and Indian Bank.

Basic arguments for such reforms:

- (i) **Greater freedom in taking lending decisions:** Commercial banks would get greater freedom in taking proper credit decisions. They can choose the sectors with higher returns and better recoverability. The banking activities will then satisfy some of the basic canons of banking, viz., safety, productivity and profitability.
 - (ii) **Increase in non-interest income:** The non-interest income of these banks can be increased by pursuing better portfolio management, merchant banking activities, export consultancy service, etc.
 - (iii) **Making innovative deposit schemes:** It would be possible for these banks to put in greater efforts to attract deposits by designing innovative deposit schemes.
 - (iv) **Creation of a competitive environment:** It would create a competitive environment in the banking sector and would improve the competitive strength of different commercial banks. This would also improve the quality of their services.
 - (v) **Adequate preparation for international banking operations:** It would also prepare Indian banks for international operations. The financial markets of developed countries have witnessed rapid advances in communications and computation technology. Hence, Indian banks, in view of such global changes, have to improve the quality of their service, as well as their ability, to take bold steps in international financial transactions. The present move towards privatisation may help them in achieving the minimum standard of capital adequacy norms.
 - (vi) **Reduction in political and administrative intervention:** Unnecessary political and administrative intervention in the lending operations of commercial banks can be avoided to a large extent. This reduction in the extra-market forces on banking operations would also improve their operational efficiency.
 - (vii) **Use of modern mechanised service operation:** These banks are supposed to use more modernised techniques, such as computers, in rendering various types of banking services. This would improve the information net-work within the banking system and would help the RBI to monitor various lending operations performed by these banks. This type of supervision is needed to avoid financial scandals and illegal bank advances (which occurred in India during the stock market scam of 1992). The Narasimham Committee also recommended such prudent regulations.
 - (viii) **Gainful amalgamation or merger:** Keeping in view the importance of size, expertise and sustained viability in the financial sector, the management and shareholders of banks and other Development Finance Institutions (DFIs) may explore some painful methods of amalgamation/merger between some banks or between banks and DFIs in a market-oriented fashion. This would improve their profitability and economic viability. The Economic Survey Report of the Government of India (1997-98) also shows that the ratio of operating expenditure to total assets (known as intermediation ratio) is as low as 1.92 per cent for the new private sector commercial banks in 1996-97 as against about 3.0 per cent in the case of public sector banks. The ratio of net profit to total assets was also maximum (1.77 per cent) in case of new private sector commercial banks in the same year. This was lowest (0.56 per cent) in the case of public sector banks.
- However, different economists have criticised this move towards privatisation in the financial sector. They have argued that this move towards privatisation would reduce the employment opportunities in the banking sector because the private bank would only be guided by their profit motives. This will also reinforce the concentration of monopoly power in the hands of private sector banks and increase the wealth and income inequalities in India.

■ Bad impacts of such emphasis on privatisation :

- Possibility of a decline in the credit flow to the rural sector :** The private sector banks give more stress on profitability and they would be less interested to extend credit facilities to small farmers, small businessmen, artisans of village and cottage industries etc. who are financially weak. They need credit facilities from the banks at a relatively lower rates of interest, but they do not possess valuable assets which can be kept as securities with the banks, while taking loans. Thus, the flow of institutional credit to the rural sector will decline, and the dependence of people on non-institutional sources of finance (like landlords, rural money-lenders who charge very high rate of interest) will increase. In fact, the percentage of rural branches of commercial banks has declined from about 52 per cent during 1994-95 to 42 per cent during 2005-06.
- Fall in employment opportunities :** In their drive to reduce the operating expenses, the private sector banks would use more computers (i.e., labour-saving technology) and Automated Teller Machines (ATM). As a result, the employment opportunities will decline in the banking sector. But, higher incidence of unemployment would mean higher income inequalities among different sections of people and greater incidence of poverty. This also results in greater social tensions which stands in the way of smooth economic progress of our country.
- Mobilised savings may not be invested in India :** If some of these banks are also merged with foreign banks, and if restrictions on the movements of financial capital (through these banks) from one country to another are withdrawn then there will be no guarantee that the savings mobilised from the Indian economy would be recycled in India or abroad.

1.5.7. Comparison between performance of public and private sector banks

During the post-reform period, there has been substantial expansion of branch offices of both private and foreign banks. Now, we can make a comparative analysis of the performances of these private, foreign and public sector commercial banks in India. We know that the scheduled public sector commercial banks in India include the banks like Punjab National Bank, United Bank of India, Bank of India, Bank of Baroda, Union Bank of India, India Overseas Bank, Dena Bank, State Bank of India and so on. On the other, the private sector commercial banks include KFC Bank, HDFC Bank, Axis Bank, Kotak Mahindra Bank, etc. The foreign commercial banks are Citibank, Standard Chartered Bank, ABN AMRO Bank, etc.

It is observed that the number of branch offices of all public sector commercial banks in India increased from 7,015 in 1969 to 90,588 in 2013. Such an expansion is also observed in case of private sector commercial banks. The branch offices of such private sector commercial banks increased from 900 in 1969 to 16,062 in 2013. Thus, it becomes clear that while the branch offices of public sector commercial banks increased by about 39 per cent during 1993-2013, the branch offices of private sector commercial banks increased by about 315 per cent during that period. This seems to be the result of a liberal policy followed by the government in this regard.

It is also observed that the number of branch offices of foreign commercial banks was only 130 in 1969 and this number increased upto 335 in 2013. It is observed that their number increased by about 132 per cent during 1993 - 2013. Thus, we see that the growth rates of branch offices of the private and foreign commercial banks have been much high compared to those in public sector commercial banks during the post-liberalisation period. However, the absolute number of branch offices of the public sector commercial banks is now higher than those of private and foreign commercial banks by more than 3 times. We can also make a comparison between all these banks on the basis of their net profit (as a % of total assets), Gross NPAs (as a % Gross Advance), Net NPAs (as a % Net Advance), Capital to Risk Weighted Asset Ratio (CRAR) etc. It is to be noted in this connection that according to the prudential norms of banking operation, each commercial bank has to make some provisions (of fund) in accordance with the riskiness of an asset (i.e., making provisions for probable loss of



an asset). When this amount of provision is deducted from the Gross NPAs, we get the Net NPAs.

Table 1.13 shows that in 2011-12 the profitability of the private and foreign commercial banks is much higher compared to that of public sector commercial banks in India. Again, within the public sector commercial banks, the profitability SBI group is higher than its counterparts. So far as the NPAs are concerned, it is observed that both Gross and Net NPAs (as percentages of Gross and Net Advances respectively) have declined gradually for both public sector and private & foreign commercial banks during the post-liberalisation period. However, the public sector commercial banks are again facing the problem of increasing NPAs in recent times (during 2009 - 12). In the maintenance of CRAR also, the private and foreign commercial banks have been more successful than the public sector commercial banks (Table 1.13).

Table 1.13
A comparison between the performance of the Private, Foreign and Public Sector Commercial Banks in India

Basis of comparison	Banks	1997-98	1999-00	2000-01	2004-05	2008-09	2011-12
(a) Net Profit (as % of Total Asset)	1. Public Sector Banks (PSB)	0.77	0.57	0.42	0.89	0.90	0.68
	2. SBI Group	1.06	0.80	0.35	0.91	0.90	0.89
	3. Private Banks (PVT.B)	1.04	0.85	0.71	0.69	1.0	1.33
	4. Foreign Banks (FB)	0.97	1.17	0.83	1.30	1.70	3.06
(b) Gross NPAs (as % of Gross Advance)	1. PSB	16.02	13.96	13.39	5.7	2.6	3.3
	2. SBI	14.57	14.08	12.73	5.3	2.6	4.6
	3. PVT.B	8.67	8.17	8.48	4.8	2.75	2.1
	4. FB	6.38	6.99	6.70	2.6	4.0	2.6
(c) Net NPAs (as % of Net Advance)	1. PSB	8.15	7.42	6.74	2.1	0.9	1.7
	2. SBI	6.89	6.77	6.26	2.2	1.0	2.0
	3. PVT.B	5.26	5.41	5.44	2.3	1.5	0.5
	4. FB	2.25	2.41	1.86	0.9	1.6	0.6
(d) CRAR (%)	1. PSB	11.13	11.4	10.7	12.9	12.3	13.23
	2. SBI	12.54	14.0	11.6	12.4	12.7	13.7
	3. PVT.B	12.46	12.7	12.9	12.3	14.7	16.31
	4. FB	25.31	10.3	11.9	14.0	15.1	16.74

Source: Report on Trend and Progress of Banking in India (Several issues), Reserve Bank of India.

1.5.8 Changing Structure of Indian Banking Sector

The banking landscape in India, particularly the arena of commercial banking, has been undergoing radical makeover in the recent decades, which can be essentially attributable to –

- change in the ownership structure and (ii) change in the composition of banking ecosystem in terms of size and scale. This emergent trend finds its motivation from the need to enhance credit support of banking entities along with making more resilient to risk of financial disruption and adverse economic development. The first strand of structural change owes to a greater regulatory openness to the entry of private sector in banking industry and a drive towards the privatisation of

public sector entities or state-owned banking institutions. The second pillar derives essentially from the effort of government toward the consolidation banking system in terms of having a limited number of large public sector entities having more expanded network of operations by dint of merger of weaker players.

■ Merger of public sector banks :

The government in August 2019 had announced the merger of 10 public sector banks into four and stronger banks. With this, the number of public sector banks in India will come down to 27 in 2017. It was widely speculated that the government may defer the consolidation exercise for some time due to the novel corona virus pandemic that has impacted our economy. This exercise became effective since April 1, 2020.

Oriental Bank of Commerce (OBC) and United Bank of India have been merged into Punjab National Bank (PNB). After the merger, these banks together will form the second-largest public sector bank in the country, after State Bank of India (SBI).

Syndicate Bank has been merged into Canara Bank, which will make it the fourth-largest public sector lender.

Indian Bank has been merged with Allahabad Bank.

Union Bank of India has been merged with Anand Bank and Corporation Bank.

Customers, including depositors of merging banks will be treated as customers of the banks in which these banks have been merged with effect from 1 April 2020.

After the merger, there will be 12 PSBs - six merged banks and six independent public sector banks.

(i) Six merged banks - SBI, Bank of Baroda, Punjab National Bank, Canara Bank, Union Bank of India, Indian Bank.

(ii) Six independent banks - Indian Overseas Bank, UCO Bank, Bank of Maharashtra, Punjab and Sind Bank, Bank of India, Central Bank of India.

As of privatisation of state-owned enterprise, Finance Minister in her speech on General Budget 2020 has moved a proposal for privatising four mid-sized public sector banks, namely: Bank of India, Central Bank of India, Bank of Maharashtra and Indian Overseas Bank in what is muffled as a move to finance voluminous fiscal deficit by dint of asset sale. This will prospectively reduce the space for public players in the banking ecosystem to the tune of eight.

● Bank Merger and Scale effect :

Oriental Bank of Commerce and United Bank merger will merge into Punjab National Bank to create a bank with ₹ 1745 lakh crore business and 11,437 branches. The merger of Syndicate Bank with Canara Bank will create the fourth largest public sector bank with ₹ 1520 lakh crore business and a branch network of 10,324. Andhra Bank and Corporation Bank's merger with Union Bank will create the fifth largest public sector bank with ₹ 1459 lakh crore business and 9,609 branches, while the merger of Allahabad Bank with Indian Bank will create the seventh largest public sector bank with ₹ 848 lakh crore business. In April 2019, Bank of Baroda amalgamated with Dena and Vijaya. In April 2017, State Bank merged its five associate banks—State Bank of Patiala, State Bank of Sikar and Jaipur, State Bank of Mysore, State Bank of Travancore and State Bank of Hyderabad and also the Bhavnagar Mahila Bank.

There are various reasons cited by the government for its decision to merge state-owned banks. One of them is that large banks will be able to lend more money and help revive the slowing economy. The government also believes that increased credit growth is essential in order to achieve its target of growing India into a \$5-trillion economy in the next few years. It is also of the view that the merger



will lead to increased operational efficiency that will help these banks lower their costs, thus enabling them to lower their lending rates. State-owned banks have been reeling under a bad loan crisis for years now. According to the government, the size of gross non-performing assets of state-owned banks stood at ₹ 7.9 lakh crore, as of March 31, 2019. Although the government has not projected the present merger as a measure to tackle bad loans, bank mergers in the past have been carried out simply to bail out struggling banks.

■ Evaluation of the Bank Merger Programme :

The banks that have been merged by the government exhibit varying financial strengths. Banks such as Indian Bank and Punjab National Bank are stronger than the smaller banks that they are being merged with under the plan. Indian Bank, which is considered to be the strongest financially among the 10 banks, for instance, has a net NPA ratio of 3.8%; it is 5.2% for Allahabad Bank. So the merger expected to adversely affect the health of Indian Bank. Not surprisingly, the shares of Indian Bank and other relatively strong banks witnessed a steep fall on the first day of trading (Tuesday) after the announcement of the merger (Friday).

It remains to be seen whether the operational benefits that the government believes will come about through the merger will compensate for the deterioration in the financials of the stronger banks.

Private businesses typically merge their operations when they believe that the merged entity will suppress their profits. Critics doubt whether the government has any similar incentive to look for synergies that can boost the profits of its banks. Interestingly, the government has assured banks that jobs will not be lost due to the merger. Many see this as a compromise to avoid any trouble from powerful bank employee unions. Given this, it seems unlikely that state-owned banks will be able to become more efficient after the merger by getting rid of redundant labour. More importantly, the merger of healthy banks with weak banks may not really improve the health of the banking system as a whole. In fact, many believe, by diluting the management of strong banks, forced mergers may lead to a significant deterioration in the overall health of the banking system. If the managers of weaker banks are punished for their poor performance by being asked to share the burden of weaker banks, any fear that there will be fewer incentives for managers to manage well. This can further negatively affect the long-term performance of state-owned banks.

The merger of banks per se will not lead to a decrease in the absolute size of bad loans in their books. Tens of bad loans in bank books can drop only if banks manage to improve the recovery of these loans or if these loans are written off their balance sheets. The bad loan recovery process remains delayed due to the inefficient judicial system in the country and banks have been unwilling to aggressively liquidate bad loans since that would require recognising greater losses. Mergers do not address these basic structural problems.

The present merger, many believe, also does not address the issue of political interference in the management of state-owned banks that is at the root of the bad loan crisis. The stated purpose of the consolidation of banks in 1969 was to use bank credit to fund the various development goals of the government. Towards this end, over the years, various state-owned banks have been forced to extend loans under political pressure even though such loans did not always make business sense. This is in contrast to private banks that are allowed to operate simply as pure businesses seeking profits.

Finally, when it comes to funding the growth needs of the economy, large banks may be able to lend more money than smaller banks due to the size of their capital base. Punjab National Bank, for instance, when merged with United Bank of India and Oriental Bank of Commerce will be the second-largest bank in the country carrying out business to the tune of around ₹ 18 lakh crore. However, some argue that large banks may not really be essential when it comes to funding big-ticket business projects. In fact, several smaller banks have come together to extend large loans. Further, companies themselves



might prefer to seek funds from multiple sources. Overall, the infusion of additional capital by the government can temporarily help banks troubled by bad loans to extend loans more confidently without the fear of going bankrupt due to their precarious capital position. But most economic analysts believe that the merger does not really address the root structural causes behind the woes facing state-owned banks in the country.

Table - 1.14
Financial Position of Amalgamated Banks, April 2020

Indicators	Bank Name PNB	Bank Name OBC	Bank Name UBI	Amalgamated Bank Amalgamated
Total Business (₹ Cr.)	11,82,224	4,04,194	2,08,108	17,94,526
Gross Advances (₹ Cr.)	3,06,194	1,71,549	73,123	5,50,867
Deposits (in ₹ Cr.)	6,76,590	2,32,645	1,34,983	10,43,699
CASA Ratio	42-16%	29-40%	51-40%	40-52%
PCR	61-72%	36-57%	31-17%	39-59%
CRAR	9-72%	12-73%	13-90%	10-77%
Net NPA Ratio	6-58%	5-67%	9-67%	6-61%
Employees	65,316	21,739	13,834	1,00,649
	Canara Bank	Syndicate Bank		Amalgamated
Total Business (₹ Cr.)	10,43,249	4,77,066		15,20,315
Gross Advances (₹ Cr.)	4,44,216	2,17,149		6,61,365
Deposits (in ₹ Cr.)	5,96,033	2,58,867		8,55,900
CASA Ratio	29-18%	33-36%		30-21%
PCR	41-48%	46-65%		44-32%
CRAR	11-80%	14-23%		12-63%
Net NPA Ratio	5-37%	6-16%		5-62%
Employees	58,380	31,205		89,585
	Union Bank	Andhra Bank	Cooperation Bank	Amalgamated
Total Business (₹ Cr.)	7,43,207	3,95,311	3,19,618	14,58,434
Gross Advances (₹ Cr.)	3,28,382	1,79,646	1,33,045	6,39,130
Deposits (in ₹ Cr.)	4,15,913	2,14,821	1,84,566	8,15,304
CASA Ratio	36-10%	31-38%	31-89%	33-82%
PCR	59-07%	68-62%	60-80%	63-07%
CRAR	11-79%	13-69%	12-30%	12-79%
Net NPA Ratio	6-85%	5-73%	5-71%	6-30%
Employees	37,262	20,306	12,775	75,364

(Contd.)



Indicators	Bank Name PNB	Bank Name OBC	Bank Name UBI	Amalgamated Bank Amalgamated
	Indian Bank	Allahabad Bank		Amalgamated
Total Business (₹ Cr.)	4,29,872	3,77,687		8,07,559
Gross Advances (₹ Cr.)	1,67,896	1,63,593		3,31,489
Deposits (in ₹ Cr.)	2,42,978	2,14,335		4,56,813
CASA Ratio	34-71%	49-49%		41-68%
PCR	49-13%	74-11%		66-22%
CRAR	13-21%	12-91%		12-89%
Net NPA Ratio	3-75%	5-22%		4-39%
Employees	19,804	23,210		43,014

CASA Ratio: Ratio of deposits in current and saving accounts to total deposits. **PCR:** Banks usually set aside a portion of their profits as a provision against bad loans. What it means: A high PCR ratio (usually above 70%) means most asset quality issues have been taken care of and the bank is not vulnerable.

15. Monetary Policy

The policy that deals with controlling the money supply in the economy, is called monetary policy. The central government of a country adopts the fiscal policy [it is the government's policy through which the government uses the instruments of taxation, public spending and public borrowing in order to achieve its various economic objectives] every year for attaining its several economic objectives. On the other hand, the central bank of the country adopts its credit control policy or the monetary policy through which it regulates the total money supply in the economy and thereby avoids the inflationary or deflationary situations in the economy. The central government and the central bank undertake fiscal policy and monetary policy respectively for attaining the desired economic objectives, such as accelerating the pace of economic growth, creating employment opportunities in the country, controlling inflation, bringing balanced economic growth, accelerating capital formation in the country etc.

The Reserve Bank of India (RBI) being the Central Bank of India and the supreme authority in the Indian money market, performs several functions. Framing monetary policy or credit policy is the primary function of the RBI. The prime objective of monetary policy of the RBI is bringing the price stability, i.e., keeping the inflation under control and ensuring sufficient flow of money supply in the economy to support the economic growth in the country. So, it can be said that through the monetary policy, the RBI strives to influence the cost of credit and thereby controls money supply in the economy.

In the monetary policy or the credit policy refers to a regulatory policy of the central bank through which it regulates the money supply in the economy and tries to bring the general price level within the acceptable limit for achieving the economic objectives of the government.

The central bank's monetary or credit policies are of two types — Such as (i) expansionary monetary policy and (ii) contractionary monetary policy.

Table 1.15

Expansionary & Contractionary Monetary Policy of the RBI

Expansionary Monetary Policy / Cheap Money Policy	Contractionary Monetary Policy / Dear Money Policy
1. This policy is followed during economic recession.	1. This policy is followed to check the inflationary pressure.
2. The RBI reduces (i) Bank rate, (ii) CRR, (iii) SLR, (iv) repo rate etc.	2. The RBI increases (i) Bank rate, (ii) CRR, (iii) SLR, (iv) repo rate, etc.
3. It reduces the cost of borrowing funds on the part of the commercial banks.	3. It raises the cost of borrowing funds on the part of the commercial banks.
4. The commercial banks can reduce their lending rates.	4. The commercial banks raise their lending rates.
5. Investment demand will rise in the economy with a fall in the lending rates offered by the commercial banks.	5. Investment demand will fall in the economy with an increase in the lending rates charged by the commercial banks.
6. Higher investment would create higher employment, output and income opportunities, and additional demand is generated in the economy. It solves the problem of economic recession.	6. A fall in aggregate investment would mean lower income and employment opportunities in the economy, so excess demand situation and inflationary pressure can be checked.

Through the expansionary monetary policy, the RBI enhances the total money supply in the country. Through the contractionary monetary policy, it squeezes the excess money supply and thereby brings down the persisting high level of inflation in the economy. During the period of economic slowdown and in the economic recession, economy confronts with multifarious problems, such as low employment, poor capacity utilisation of industries, downward movement of capital expenditure cycle (apex cycle), failure of creating infrastructure facilities and there is an utter lack of feel good factor across the country. At that juncture, the RBI, by reducing the rate of interest, induces huge amount of money supply (that is, the RBI's adopting expansionary monetary policy) in order to bolster up the economic activities in the country. It is also called as 'cheap money policy'. When the economy bears the brunt of the stubbornly high rate of inflation, the RBI adopts the contractionary monetary policy. Persistently high rate of inflation has a pernicious impact on the economy. It reduces the real consumption, lowers savings, widens the current account deficits and hurts the poor. So, in order to tame the high rate of inflation, the RBI adopts contractionary monetary policy. Through the contractionary monetary policy, the RBI restrains the money supply in the economy. It enhances the interest rate by qualitative and quantitative techniques and thereby squeezes the money supply in the economy. It is also called as 'dear money policy'. High rate of interest discourages the entrepreneurs to trim their credit requirements and borrow lesser amount of credit from banks. As a result, credit creating capacity of the commercial banks gets reduced and the money supply in the economy reduces. It helps in pulling down the high rate of inflation in the country.

1.5.1. Objectives of Monetary Policy

The Central bank of a country, being the highest regulatory authority of the banking system, undertakes huge responsibility to control the overall money supply in the country and ensure price stability in the country. It adopts its monetary policy considering various relevant macroeconomic factors. Through this policy, it regulates the money supply in the economy, serves to keep the inflation within the acceptable limit in the economy and aims at bringing the economy on the growth trajectory. Thus, the principal objectives of the monetary policy are: (i) to ensure economic growth of the country and (ii) to maintain this growth with price stability.



The main objectives of the monetary policy of the central bank are discussed below:

- (i) **Regulating money supply in the economy**: The Central bank through its monetary policy regulates the total money supply in the country. It adopts expansionary credit policy for enhancing the total money supply when the economy faces the slowdown. When there is excess money supply in the economy, it adopts contractionary credit policy to squeeze the excess money and brings down the persistently high rate of inflation.
- (ii) **Maintaining price stability**: In order to control the persistently high rate of inflation in the economy, the central bank adopts various measures through its monetary policy. When there is excess liquidity in the system, inflation is likely to increase. Persistently high rate of inflation erodes real consumption, lowers savings, widens current account deficit and hurts the poor. It is a threat to economic growth. So, in order to reduce the high rate of inflation, the central bank takes necessary measures through its monetary policy. Similarly, at the time of economic recession, the RBI adopts such monetary policy that helps in creating additional demand in the economy.
- (iii) **Fostering economic growth**: When the economy is bearing the brunt of slowdown and the economy fails to pick up its economic growth, the central bank adopts various steps through its monetary policy to accelerate the economic growth. The central bank, at that time, adopts expansionary credit policy and enhances the money supply in the economy so that the industries get credit at lower rates of interest and invest in various projects. So, the availability of credit at low cost boosts up the economic activities in the country and over a span of time, the economy recovers.
- (iv) **Bringing exchange rate stability**: The central bank through its monetary policy tries to stabilise the exchange rate of the country's currency with that of foreign currencies. The central bank takes stringent measures to prevent the fall in the value of the domestic currency. So, in order to prevent the depreciation of the domestic currency, the central bank through its monetary policy takes some stringent measures. For instance, the RBI introduced the market stabilisation scheme in 2004 to maintain stability in the foreign exchange market.
- (v) **Controlling business cycles**: Economy of every country moves cyclically. After attaining the peak in economic condition, it slowly falls downwards and gradually moves towards economic slowdown or economic recession [When the GDP growth of the two consecutive quarters becomes negative]. In the phase of economic slowdown or economic recession, economic activities in the country become slackened. As a result, per capita income of the country falls drastically. It reduces the effective demand in the country and affects the production of goods and services. Capacity utilisation of the industries is also adversely affected, and it rises the rate of unemployment in the country. As a whole, the economy is gripped by a recession. At this juncture, the government takes some proactive measures through its fiscal policy to boost up the economic activities. The central bank, on the other hand, adopts expansionary monetary policy congenial for the industries. It reduces the key rates such as 'CRR', 'SLR', 'repo rate', etc., and enhances the money supply in the country. As a result, with the passage of time, economic activities in the country get the booster dose from the government as well as from the central bank, and the economy recovers over a span of time.
- (vi) **Promoting savings and investment**: The central bank adopts monetary policy in such a way that the people become encouraged to save in the banks. If the rate of savings remains low, it slows the capital formation in the country. For that reason, central bank adopts conducive monetary policy so that savings and investments are encouraged.
- (vii) **Priority sector lending**: The central bank adopts some measures through its monetary policy for availing sufficient amount of credit at low rate of interest to the priority sectors. It

adopts conductive credit policies so that agriculture, small and medium sized enterprises etc. get sufficient amount of credit at low rate of interest and on easy terms and conditions. It gives a fillip to the priority sectors in the economy.

- (8) **Providing credit for developing infrastructure** : The central bank, through its expansionary policies, ensures lending credit at low rate of interest and on easy terms and conditions for the development of infrastructure in the country. It propels the economic growth in the country.
- (9) **Promoting employment** : Through the credit policies, the central bank ensures sufficient amount of credit to the basic industries, infrastructure sector etc. which can generate ample employment opportunities in the country.
- (10) **Bringing stability in interest rate** : The central bank tries to stabilise the interest rate in the banking sector. If the interest rate becomes too volatile it affects the economic activities in the country. So, it adopts such necessary measures so that the rate of interest becomes stable in the economy.
- (11) **Fulfilling the planned objectives** : The central bank adopts monetary policy in such a way that various economic objectives of the government can be achieved. It takes amenable credit policies which become supportive for attaining the planned economic objectives of the government.
- (12) **Promoting foreign trade** : The central bank adopts proper credit policies which become supportive for expanding foreign trade in the country. In order to encourage the entrepreneurs it allows some incentives for promoting foreign trade.

1.5.2. Monetary Policy in India : Its Evolution

Since independence our country required huge amount of capital to boost up the industry, trade and commerce and to develop basic infrastructure in the country to support for notching up high economic growth. For that reason, at the initial stages for developing the economy expeditiously, the RBI had taken expansionary credit policy [that is, enhancing money supply in the economy by lowering the interest rate]. Through this credit policy, the RBI enhanced the banking credit to industries. As a result, over a period of time, due to excess money supply in the economy, inflation moved up gradually. In order to tame down the stubbornly high inflation in the economy, the RBI had to take some stringent measures. The RBI adopted contractionary monetary policy [that is, reducing money supply by enhancing the rate of interest] to squeeze the excess money from the economy. So, the RBI maintained a dual monetary policy to boost up economic growth and to control persistently high rate of inflation.

The RBI's monetary policies since the inception of the second five year plan (1956-61) till today can be discussed in three phases.

- (1) **The first phase (1956-72)** : At this initial phase, the RBI adopted a controlled expansionary policy. In order to enhance money supply in the economy and to make funds available for the industries at low rate of interest, the RBI adopted expansionary credit policy. As a result, due to the enhancement of money supply in the economy, rate of inflation moved up sharply. At that time, in order to contain the high rate of inflation, the RBI used various tools to take out the excess money from the economy. So, the RBI enhanced the bank rate from 3% to 6%, the cash Reserve Ratio (CRR) from 3% to 5%, and the statutory liquidity ratio (SLR) from 20% to 25% and opted selective credit control technique to contain the high rate of inflation. During the period 1966-1970, due to the positive impact of the green revolution in India, some stability could be achieved in the inflation front.
- (2) **The second phase (1972-1991)** : During this phase, i.e., during the pre-reform period, inflation rate remained too high. So, in order to contain the inflationary pressure, the RBI raised 'CRR'



sharply and adopted open market operations technique. It raised the statutory liquid ratio (SLR) to as high as 30-35%.

- (3) **The third phase (After 1991)** : During the post economic reform period [when the Indian economy adopted financial and structural reforms] some sense of optimism was hovering around the economic sky of India, and the RBI adopted completely different monetary policies. At that time, the monetary policy had undergone an enormous change. As recommended by the Narshimham committee, the RBI had taken the following measures:

- (i) It reduced 'CRR' to 10% in 1998 and it was further reduced to as low as 4.5% in 2003. Such a reduction was made to unleash an influx of liquidity in the economic system.
- (ii) It reduced the bank rate gradually.
- (iii) Sometimes it increased the repo rate and 'CRR' when the inflation has gone up beyond the acceptable limit.
- (iv) It raised the maximum limit of personal advance from ₹ 10 lakh to ₹ 20 lakh in order to encourage the entrepreneurs.
- (v) It introduced interest rate futures for the entrepreneurs to hedge their risks against interest rate fluctuations.
- (vi) Very recently (in December 2013), the RBI has introduced a newly innovated savings scheme which will generate a positive inflation adjusted returns for the savers. This financial instrument is known as consumer inflation-linked Savings Bonds Certificate.
- (vii) The interest rate structure which was previously administered in nature, began to be determined by market forces of supply and demand for loanable funds.
- (viii) RBI's control over the commercial bank with regard to the fixation of lending rates was reduced : the commercial banks were given more freedom in determining the interest rates on term deposits.
- (ix) The SLR was reduced from 30-35% to 25% in 1996. It has gradually been reduced and it remained 21-25% in 2016. The reduction in CRR and SLR increased the supply of loanable fund with the commercial banks.
- (x) The entry of foreign investment in the Indian banking sector was liberalised (by raising the FDI limit in private sector banks upto 74% of the paid up capital).
- (xi) The liquidity adjustment facility was introduced since 1999 to meet the short-term credit needs of the commercial banks through the introduction of repo and reverse repo rates. These rates act as the benchmark of money market rates.
- (xii) The Marginal Standing Facility was introduced in 2011 to meet the very short-term credit demand of the commercial banks.
- (xiii) The benchmark Prime Lending Rate (BPLR) (viz., the minimum possible lending rate that any commercial bank can charge from the most creditworthy borrowers) system was substituted by the 'Base Rate' since July, 2010. The commercial banks were given the freedom to determine this base rate. It is the minimum rate below which the banks were not allowed to lend.
- (xiv) To make the monetary policy more effective, the RBI has introduced Marginal cost of Funds based Lending Rate (MCLR) for the commercial banks since April 2016. According to this new policy, any change in the repo rate would be quickly reflected in the lending rates of the commercial banks.

In line with the recommendations of 'Committee to Review and Strengthen the Monetary Policy Framework 2014' chaired by Dr. Ujit Patel, former Governor of RBI, an agreement was signed



between Government of India and RBI to institute a monetary policy committee in 2016. The aim was to restrain the inflation rate, as measured by consumer price index, in between 2 per cent per cent, with the target inflation rate being fixed 4 per cent. This led to the inception of a new beginning approach to monetary policy, wherein RBI's decision on repo rate would be anchored to CPI inflation rate.

The monetary policy of the Reserve Bank of India will be discussed at length in Chapter 4.

1.6.3. PLR, BPLR and Base Rate

Until 2001, the commercial banks in India used the Prime Lending Rate (PLR) while providing credit facilities to the most credit worthy customers. It was lower than the normal lending rate. It was also called as the benchmark Prime Lending Rate (BPLR). The aim was to price the bank loans on the actual cost of funds. However, it was observed that bulk of the wholesale credit flows to corporate customers was contracted at sub-BPL rates and it comprised nearly 20% of all bank credit. Under this system, banks were subsidising corporate loans by charging high interest rates from retail, small and medium enterprise customers.

This system defeated the purpose of having a prime lending rate, or the rate that banks charge from its best customers. It also resulted in another problem: bank interest rates moved in response to monetary policy changes that the RBI introduced periodically.

Subsequently, in October 2009, the RBI decided to move all banks to a new interest rate system. In April 2010, after a series of circular, discussion, and a rigorous consultative process, the RBI announced its decision to implement the Base Rate with effect from 1 July 2010. The Base Rate is that minimum interest rate below which the banks are not permitted to lend. Under the new rule, banks were free to use any method to calculate their base rates (the RBI did provide an 'illustrative formula'), provided the RBI found it consistent.

Tenor premium (an additional slab of interest over the base rate for term lending), risk premium (depending on the risk slot in which a bank places a customer) and product premium (cost of administering a particular product) were added to the base rate. All these premium amounts are legitimate and have been allowed by the RBI. In most of the public sector banks, the base rate remained between 9.25% to 9.75%.

1.6.4. Marginal Cost of Funds based Lending Rate

The Reserve Bank of India has brought a new methodology of setting lending rate by commercial banks under the name Marginal Cost of Funds based Lending Rate (MCLR). It will modify the existing base rate system from April 2016 onwards.

As per the new guidelines by the RBI, banks have to prepare Marginal Cost of Funds based Lending Rate (MCLR) which will be the internal benchmark lending rates. Based upon this MCLR, interest rate for different types of customers should be fixed in accordance with their riskiness.

As per the new guidelines, banks have to set five benchmark rates for different tenure of time periods ranging from overnight (one day) rates to one year.

The new methodology uses the marginal cost or latest cost conditions reflected in the interest rate given by the banks for obtaining funds from deposits and while borrowing from RBI with setting their lending rate. This means that the interest rate given by a bank for deposits and the repo rate (for obtaining funds from the RBI) are the decisive factors in the calculation of MCLR.

• The need for this lending rate reform:

At present, the banks are slightly slow to change their interest rate in accordance with repo rate change by the RBI. Commercial banks are significantly depending upon the RBI's LAF repo to get short-term funds.



But they are generally reluctant to change their individual lending rates and deposit rates with periodic changes in repo rate. Whenever the RBI changed the repo rate, it was verbally compelling banks to make changes in their lending rate. The purpose of changing the repo is realised only if the banks are changing their individual lending and deposit rates. Thus, the effectiveness of the monetary policy is not fully realized.

Now, the novel element of the MCLR system is that it facilitates the so called monetary transmission. It is mandatory for banks to consider the repo rate while calculating their MCLR. The RBI calls the effective passing of repo rate change into interest rate change by the banking system as an important part of monetary transmission. Monetary transmission in complete sense is the way in which a monetary policy signal (like a repo rate cut) is passed into the economy in producing the prefixed outcomes.

Previously under the base rate system, banks were changing the base rate, only occasionally. They waited for long time or waited for large repo cuts to bring corresponding reduction in their rate. Now with MCLR, banks are obliged to readjust interest rate monthly. This means that such quick revision will encourage them to consider the repo rate changes.

Following are the main components of MCLR:

- Marginal cost of funds;
- Negative carry on account of CRR;
- Operating costs;
- Tenor premium.

Negative carry on account of CRR: It is the cost that the banks have to incur while keeping reserves with the RBI. The RBI is not giving an interest for CRR held by the banks. The cost of such funds that are kept idle can be charged from loans given to the people.

Operating cost: It is the operating expenses incurred by the banks.

Tenor premium: It denotes that higher interest can be charged from long-term loans.

The marginal cost of funds: It will comprise of marginal cost of borrowings and return on net worth.

According to the RBI, the Marginal Cost should be charged on the basis of following factors:

- Interest rate given for various types of deposits, viz. on savings deposit, term deposit, foreign currency deposit etc.
- Interest rate on borrowings, viz. short-term interest rate or the repo rate, long-term rupee borrowing rate, etc.
- Return on net worth in accordance with capital adequacy norms.

The marginal cost of borrowings shall have a weightage of 92% of Marginal Cost of funds while return on net worth will have the balance weightage of 8%. In essence, the MCLR is determined upon by the marginal cost for funds and especially by the deposit rate and by the repo rate. Any change in repo rate brings changes in marginal cost and hence the MCLR should also be changed.

1.6.5. Evaluation of RBI's Monetary Policy

Although the RBI has taken its monetary policies in a calibrated manner, it failed to achieve its desired goals. Indian economy has been facing persistently high rate of inflation and slow economic growth. Sometimes it faces the problem of 'Stagflation', i.e., the coexistence of inflation and stagnation in the economy. The RBI's credit policy has not been so much effective as it failed to recover the economy from the stagflation fully. But one thing should be kept in mind that the RBI cannot be blamed solely for low economic growth and high inflation. So, the RBI is not responsible alone for the economic stagnation. Some other factors deterred its monetary policy; these are discussed below:



- (i) **Non-effective fiscal policy**: The Central Government's fiscal policies were not much effective although the RBI has taken pro-growth monetary policy.
- (ii) **Lack of autonomy**: The Central Government intervened in several occasions in the functioning of the RBI.
- (iii) **Existence of unorganised sector**: Unorganised sector provides large amount of credit in the market which hampered the credit policy of the RBI.
- (iv) **Financial scams**: Several financial scams in the Indian finance market hampered the effectiveness of the RBI's credit policies.
- (v) **Lack of Government co-operation**: There was a lack of co-operation from the government of India in some cases in order to implement the credit policy of RBI effectively.
- (vi) **Inflow of foreign fund**: Large amount of foreign fund had flown in India. It has reduced the effectiveness of the RBI's credit policy towards restricting the supply of loanable fund.
- (vii) **Non-existence of integrated interest rate structure**: Indian financial market suffers from non-existence of integrated interest rate structure in the economy. As a result, credit policy of the RBI could not be implemented successfully.
- (viii) **Existence of NBFCs**: Non-banking financial companies (NBFCs) existing in the Indian financial market, provided inflow of capital to the industries. But the RBI could not exercise any control to regulate the credit given by these institutions. So, in some situations, the RBI's credit policies become ineffective.
- (ix) **Improper use of fiscal resources**: Government's fiscal profligacy creates inflation in the government's exchequer. Thereby it fuels the inflation in the country.
- (x) **Undue pressure to reduce interest rate**: Sometimes the government creates undue pressure to reduce the interest rates and thereby enhances the money supply in the economy to provide an impetus to the industries. Industrialists also clamor for lowering down the interest rate to reduce the cost of borrowings. As per their demands, the RBI sometimes reduces interest rates. As a result, excess money supply may accentuate the inflation in the economy. So, the RBI cannot be blamed solely for the peril of high rate of inflation in the country.

Summary

Before the advent of money there was the system of direct exchange between goods and services. This was known as the barter system. The difficulties of the barter system were (1) that there was no guarantee between any two people, each will demand the good that the other has; (2) that it was soon realised that some commodities were indivisible; and (3) that its operation needed complex calculations.

These difficulties led to the use of money. It was noticed that money increased the efficiency of the exchange system and that money was the most liquid form of wealth.

Money has four functions: (i) acts as a medium of exchange, a measure of value, a standard for deferred payment and a store of value.

A bank is a business firm whose main function is to give and accept credits. There are various types of banks, e.g., central bank, commercial banks, development banks, co-operative banks, bond mortgage banks, exchange banks, indigenous bankers, etc.

The functions of commercial banks are: (1) accepting deposits, (2) giving credit, (3) discounting bills of exchange, (4) creation of money and (5) other subsidiary functions (6) insurance, giving various types of services to the customers).

Commercial banks promote economic development by giving loans to individuals and by promoting people's saving habits.

Credit creation is the most important function of commercial banks. Banks hold only a small percentage of



their deposits as reserves. The rest they can lend out. But when a bank lends to an investor, the deposit given by the investor are deposited into other banks. The other banks' deposits go up and they can advance their lendings. The process continues but is convergent, i.e., the total increase in credit in the economy resulting from an initial increase in the deposits of one particular bank can be calculated.

The amount of total credit creation will be limited by: (1) the state of development of people's banking habits, (2) the cash reserve ratio of the banks, (3) total amount of mortgageable assets and (4) the willingness of businessmen to take loans from banks.

Banks play a useful role in the economic system. They — (1) encourage saving habits, (2) mobilise savings in investment, (3) act as channels for the operation of the Government's monetary policy, (4) cause the rate of economic growth, and (5) also help in fulfilling other objectives of economic growth.

Central bank is the bank that is given the power to supervise all the other banks in the country and the overall monetary system.

The need for the existence of a central bank comes from the need to ensure that the commercial and the other banks in the economy carry on their activities according to the national economic interests.

The functions of a central bank are: (1) issuing paper notes, (2) acting as a banker to the Government, (3) acting as a banker to the other banks, (4) controlling the amount of credit created by banks, (5) stabilising the value of money, (6) supervising the working of financial institutions and (7) maintaining the external value of currency.

In an open economy with administered exchange rate system central bank resorts to buying and selling of bonds to offset the impact on money supply of its intervention in foreign exchange market aimed at stabilising the exchange rate against fluctuations in trade and investment flows. This is what is referred to as sterilisation.

In India, sterilisation has been prominently in vogue since the time great economic reforms aimed at making the export-competitive industries independent against sharp appreciation of rupee vis-à-vis dollar. The conserving role of RBI as against its exchange rate intervention was institutionalised through the introduction of Market Stabilisation Scheme (MSS) in 2002.

The banking system in India indicate a hierarchical structure with RBI at its top, followed by the system of Scheduled and Non-scheduled banks. The scheduled banks branch into — scheduled commercial banks (consisting of public sector, private sector, foreign banks and regional banks) and scheduled cooperative banks (comprising urban and rural cooperative banks).

In India reform in banking sector was a flagship of economic liberalisation introduced in 1991, which had been an improving structural soundness and operation efficiency of the banking sector which is crucial to achieving sustained economic growth. The reform took its roadmap principally from the recommendations of Narasimham Committee I (1991) & II (1998) on financial system pertaining to partial (partial)isation of banks from the control of RBI (and indirectly government) and greater autonomy for banks in interest rate and lending decisions, imparting prudence in regard with income recognition and asset classification, along with control of non-performing asset and enhancing the resilience of banks through reorganisation of capital structure.

Some recent trends in reform in regulatory and supervisory aspects India banking ecosystem, particularly growth mitigating persistent NPA issue includes, formation of joint-lending forum, strategic debt restructuring, introduction of Insolvency and Bankruptcy Code (2016) and provision for prompt corrective action (PCA).

There has happened of late a major structural shift in India's monetary policy system, wherein the decision in its policy rate, i.e., repo rate is driven by policy rate fixed on inflation rate as per consumer price (CPI). This particular mode of conduct is referred to inflation targeting monetary policy which triggers change in policy rate as much it is required to anchor the inflation rate at 4 per cent within bound 2 per cent and 6 per cent. This reform in the monetary policy framework came at the backdrop of Ujjain Patel Committee to review and strengthen the monetary policy framework (2014).



It should be noted that the magnitudes of deposit multiplier, currency multiplier and money multiplier would be different with and without the presence of excess reserves with the commercial banks.

Thus, the money supply in an economy is determined by: (i) the required reserve ratio in the money market by the commercial banks, (ii) the currency deposit ratio, (iii) the desired excess reserve ratio of the commercial banks and (iv) the monetary base of the economy. When the money supply remains independent of changes in the interest rate then it is called *exogenous money supply* where the desired excess reserve ratio and the currency deposit ratio remain independent of the changes in interest rate. However, when these ratios are being influenced by the changes in interest rate then we call the money supply as *endogenous money supply*.

In the money market, the principal role of the commercial banks makes them special institutions in the financial sector of an economy. The commercial banks can also act as the *leveraging mechanism* in the financial market. The ratio of tier-1 capital to the total assets of a commercial is called as the *tier-1 capital leverage ratio* and an increase in this ratio implies to some extent as the improvement in financial health of commercial banks. The debt-equity ratio of any commercial bank can also measure the leverage of a commercial bank. Higher borrowing on the part of a commercial bank makes it more leveraged. During a period of economic prosperity or boom period, this leveraging mechanism can make the commercial bank more efficient since the cost of borrowing normally remains lower than the returns from investments made by the commercial banks. However, excessive leveraging may be proved to be a risky proposition for a commercial bank during a period of economic recession.

The portfolio management by any commercial bank implies how a commercial bank manages its assets and liabilities so as to earn the highest possible profit. This portfolio management involves around four the following four major elements, viz. liquidity management, asset management, liability management and capital adequacy management.

Objective Question Bank

Q. 1. Define money.

Ans.: According to Crowther, "anything that is generally acceptable as a means of exchange, and at the same time acts as a measure and store of value", can be considered as money.

Q. 2. Mention two primary functions of money.

Ans.: The two primary functions of money are

- (i) Money acts as a medium of exchange, and (ii) Money acts as a measure of value.

Q. 3. State any one of the secondary functions of money.

Ans.: One of the secondary functions of money is that it acts as a standard of deferred payment.

Q. 4. Mention one of the contingent functions of money.

Ans.: One of the contingent functions of money is that it assists the producers in taking production decisions.

Q. 5. What is a token money?

Ans.: If the face value of money exceeds its intrinsic value, it is called a token money.

Q. 6. What do you mean by 'fiat' money?

Ans.: When the value of the currency notes and coins is derived from the guarantee provided by the issuing authority (say, the RBI), then these currency notes and coins are called 'fiat' money.

Q. 7. What is a legal tender?

Ans.: When the currency notes and coins of a country cannot be refused by its citizens for the settlement of any type of transaction, then these currency notes and coins are called as legal tender.



Q. 8. Define supply of money in an economy.

Ans.: The supply of money in an economy refers to the stock of money held by the public at any particular point of time.

Q. 9. What are the constituents of M_1 in the money supply of a country?

Ans.: The M_1 constitutes (i) the currency with the public, (ii) demand deposits with the commercial banks and (iii) other deposits with the Central Bank.

Q. 10. Define a Central Bank.

Ans.: The bank which acts as the banker of all the banks, the banker to the government and has the sole authority to regulate the money supply of the country, is considered as the Central Bank (say, the Reserve Bank of India).

Q. 11. State any one important function of the Central Bank of a country.

Ans.: The principal function of the Central Bank of a country is to issue notes or paper currency.

Q. 12. Which bank is considered as the 'lender of the last resort' for all commercial banks?

Ans.: The Central Bank of a country is considered as the 'lender of the last resort'.

Q. 13. Name two instruments of the quantitative credit control policy of the Central Bank.

Ans.: The Bank Rate and the Cash Reserve Ratio are the two instruments of the quantitative credit control policy of the Central Bank.

Q. 14. Name two instruments of the qualitative credit control policy of the Central Bank.

Ans.: The differential rates of interest and the margin money requirement are the two instruments of the qualitative credit control policy of the Central Bank.

Q. 15. What is bank rate?

Ans.: It is that discount rate at which the Central Bank of a country rediscounts any security submitted by the commercial banks for taking loans from the Central Bank.

Q. 16. What do you mean by open market operations?

Ans.: It indicates the purchase and sale of Government securities by the Central Bank for regulating the money supply in the economy.

Q. 17. How does the Central Bank change the Cash Reserve Ratio (CRR) to control the inflationary pressure?

Ans.: The Central Bank raises the CRR to control the inflationary pressure.

Q. 18. What is meant by the Cash Reserve Ratio?

Ans.: The proportion of net demand and time deposits which the commercial banks are to keep as reserve with the Central Bank, is called as the Cash Reserve Ratio.

Q. 19. What is money?

Ans.: Different economists have defined money in different ways. However, they agree so far as the functions of money is concerned. Hence, it is best to define money in terms of its four basic functions. Therefore, money is anything which acts as a medium of exchange, a measure of value, a standard of deferred payment and a store of value.

Q. 20. State two functions of money.

Or Explain the 'medium of exchange' function of money.

Ans.: Money acts as a medium of exchange. Different goods and services can easily be exchanged with one another in terms of money. For instance, the price of a house, expressed in money terms is ₹ 2,00,000 and that of a cow is ₹ 1,000. Thus, any person can sell his house for ₹ 2,00,000 and with that amount of money, he can either purchase one or two cows.

Money is also a measure of value (or the unit of account). The value of different goods and services can easily be expressed in money terms and, therefore, we can also make a comparison of the goods in terms of their value. It also helps us in estimating the value of total goods and services produced in a country during a year.

Q. 21. Explain the 'store of value' function of money.

Ans.: Wealth is usually kept in the form of money since money is the most liquid form of wealth. Savings in the form of money can be used for purchasing different goods and services. Hence, this is considered as the store of value function of money.

Q. 22. Explain the 'standard of deferred payment' function of money.

Ans.: Deferred payments imply those payments which are to be made in future. If somebody takes a loan at present, it has to be repaid in future along with interest. Money performs this function of deferred payments without much difficulty.

Q. 23. What are the different components of the supply of money?

Or, Explain the meaning of M_1 and M_2 supply of money.

Ans.: The supply of money consists of various components. Some of these components are mentioned below:

M_1 = Currency with the public + demand deposits with the commercial banks + other deposits with the Central Bank.

M_2 = M_1 + postal savings bank deposits.

M_3 = M_2 + (net) time deposits with the commercial banks.

M_4 = M_3 + total deposits with the postal savings organisations (including National Savings Certificate).

Q. 24. What are the estimates of 'narrow money' in an economy?

Ans.: While estimating the constituents of money supply in an economy, M_1 and M_2 measure the 'narrow money'.

Here, M_1 = Rupee notes and coins with the public + demand deposits with the commercial banks + other deposits with the Central Bank.

M_2 = M_1 + Postal savings bank deposits.

Q. 25. What is the estimate of 'aggregate supply of monetary resources' in an economy?

Ans.: In the process of estimating the money supply in an economy, M_4 is considered as the estimate of 'aggregate supply of monetary resources' in an economy.

Here, M_4 = M_1 + (Net) Time deposits with the commercial banks.

Where, M_1 = Currency held by the public + demand deposits with the commercial banks + other deposits with the Central Bank.

Q. 26. What do you mean by High-Powered money in an economy?

Or, What is the monetary base or the Reserve money of an economy?

Ans.: The High-Powered money refers to the total liability of the monetary authority (viz., the Central Bank) of the country.

It consists of: (i) Currency held by the public;

(ii) Cash reserve with the commercial banks;

(iii) Required reserve of the commercial banks to be maintained with the Central Bank; and

(iv) Other deposits with the Central Bank.

This High-Powered money is also called as the monetary base or the Reserve money of the country.



Q. 27. Explain the concept of money multiplier.

Ans.: If there is an increase in the High-Powered money (H) (or monetary base) of a country, then the total supply of money (M) may rise by a multiple of that original rise in H.

So, $M = mH$, where m = money multiplier.

Q. 28. What do you mean by commercial banks?

Ans.: The banking organisations which accept deposits from the public, lend money to the business firms and their clients, and facilitate the creation of credit money through their loan-giving operations, are considered as commercial banks. For example, the Punjab National Bank, the Central Bank of India, the State Bank of India etc., are the commercial banks.

Q. 29. Mention two important functions of a commercial bank.

Ans.: Two important functions of a commercial bank are as follows:

(a) The primary function of a commercial bank is to accept deposits from the people, e.g., fixed deposits, current deposits and savings deposits. Except for current deposits, the bank gives interest on all such deposits.

(b) Another important function of a commercial bank is to provide credit facilities. It gives short and medium-term loans to different individuals or institutions against some collateral securities or by mortgaging some assets. The bank charges interest on such loans.

Or, Explain discounting bills of exchange as one of the functions of banks.

Ans.: Discounting bills of exchange is one of the important functions of the commercial banks. In case of credit sale, the seller prepares the bills of exchange and the buyer agrees to pay the amount mentioned in the bill after a certain period (generally after 90 days). However, if the seller requires money before that time, he can place the bill to any commercial bank. The bank makes payment to that 'seller' after making a discount (say, 10%) on the value stated in the bill.

Q. 30. Mention any five types of banks found in India.

Ans.: The following are two types of banks found in India:

(i) **Central Bank:** The Central Bank is an apex bank, i.e., it is the banker to all commercial banks in the country, and also acts as a banker to the Government. In India, the Reserve Bank of India is the Central Bank.

(ii) **Commercial banks:** Those banks which generally accept deposits from the public and give short-term loans to business firms and individuals, are known as commercial banks. For instance, the Bank of Baroda, Punjab National Bank, Allahabad Bank, etc., are the commercial banks of India.

Q. 31. What is a Central Bank?

Ans.: The bank which is given the responsibility of supervising the activities of all other banks in the economy, as well as the entire monetary system of the country, is called the central bank of the country. The Reserve Bank of India is the central bank in India. In England, the Bank of England is the Central Bank.

Q. 32. To whom does the phrase 'lender of the last resort' allude and why?

Or, Why is the Central Bank considered to be the lender of the last resort?

Ans.: The phrase 'lender of the last resort' alludes to the central bank of the country. The reason is that, just as the public can borrow from commercial banks, the commercial banks can borrow



from the central bank, if they need loans. However, the central bank usually issues the commercial banks should first explore other sources of loans. It would grant loans to banks only when all other sources of loans have been exhausted.

Q. 33. State three functions of a Central Bank.

Or, Explain the functions of the Central Bank as a banker to the Government.

Ans.: The Central Bank of a country performs both regulatory and developmental functions. The following are the three important functions of a Central Bank:

- Issuing paper notes:** The Central Bank has the sole authority to print currency notes in a country.
- Acting as a banker to the Government:** The Central Bank also acts as the banker to the Government. The Government maintains an account with the Central Bank. All types of income of the Government are deposited into this account and all the expenses of the Government are also incurred out of this account.
- Acting as a banker to commercial banks:** Commercial banks also keep a certain percentage of their total deposits with the Central Bank, and they can also borrow from the Central Bank. In fact, the Central Bank is the ultimate saver of commercial banks in times of their exigencies. Thus, the Central Bank is also regarded as the *lender of the last resort*.

Q. 34. What is the bank rate?

Ans.: The bank rate is that discount rate at which the Central Bank rediscounts different bills of exchange submitted by commercial banks, while taking loans from the Central Bank. Simply speaking, the bank rate is the rate of interest at which the Central Bank lends money to commercial banks. It is regarded as an instrument of the credit control policy of the Central Bank.

Q. 35. What do you mean by quantitative credit control?

Ans.: This signifies the credit control policy of the Central Bank of any country, which wants to control the total volume or total quantity of credit-flow within the economy. Some of the important instruments of this credit control policy are: bank rate, open market operations, cash reserve ratio, etc. Through these instruments, the Central Bank wants to control the inflationary or deflationary pressures in an economy.

Q. 36. Explain the term 'qualitative/selective credit control'.

Ans.: This is a particular variety of the credit control policy of the Central Bank of any country. It wants to control the flow of credit on the basis of the quality of credit, i.e., on the basis of the purpose for which the credit facility is extended by commercial banks or on the basis of the creditworthiness of the borrowers in a selective manner. According to this policy guidelines, commercial banks can charge relatively higher rates of interest while giving loans to the richer sections of the people and relatively lower interest rates in the case of the poorer sections of the people.

Q. 37. Mention two quantitative and two qualitative measures of credit control.

Ans.: Both quantitative and qualitative measures of credit control are undertaken by the Central Bank of any country. Two quantitative measures of credit control are bank rate and open market operations. On the other hand, two qualitative measures of credit control are differential rates of interest and margin money requirement (e.g., relatively lower rates of interest may be charged by the commercial bank while extending credit facilities to poor persons or priority sectors).



Q. 38. Mention two advantages of a bank account.

Ans.: We can point out the following two advantages of bank accounts (like the savings account or the current account or the fixed deposit account, etc.) opened by different persons with different commercial banks:

- These accounts help in mobilising the small savings of a large section of people in the country and channelling the same towards productive investment; and
- If the small savings are deposited in commercial banks, then the small-savers earn interest on their savings. This would not have been possible if the money had been kept idle with them.

How do commercial banks create credit money?

Ans.: Although commercial banks cannot print money, these banks do create money. Money is created by giving credit. Cheques drawn on bank deposit are used as money in the market. When a businessman approaches a bank for a loan, the bank creates an imaginary deposit in his name. He can draw cheques on this deposit. This is how banks create credit money nowadays.

Q. 39. Discuss in brief any two quantitative credit control instruments of the Central Bank, say, the Reserve Bank of India.

Ans.: The credit control instruments of the Reserve Bank of India (RBI) which control the total quantity of credit-flow within the economy, are called quantitative credit control instruments. Two such instruments are:

- Bank Rate:** It is that discount rate at which the Central Bank of a country rediscounts any security submitted by the commercial banks for taking loans from the Central Bank.
- Open market operations:** This indicates the purchase and sale of Government securities or treasury bills by the RBI. At the time of inflation, the RBI sells Government securities in the open market to pump out some amount of money from circulation. Most of these securities are purchased by commercial banks and other financial institutions.

Q. 40. What is bank rate? How does it influence the total money supply?

Ans.: The bank rate is that discount rate at which the central bank of any country rediscounts any bill of exchange submitted by any commercial bank to take loans from the Central Bank. When the Central Bank increases the bank rate, the cost of borrowing credit money becomes higher for the commercial banks. So, commercial banks are then permitted to increase their lending rates. This discourages the investors to take loans from commercial banks, resulting in a fall in investment (and hence, the total supply of money) in the economy. In a similar fashion, when the bank rate is decreased then it leads to an increase in total money supply in an economy.

Q. 41. Explain briefly the qualitative/selective credit control policy of the Central Bank, say, the Reserve Bank of India.

Or, Explain the 'fixation of margin required on secured loan' function of the Central Bank.

Ans.: When credit control measures are imposed by the Central Bank, say, the Reserve Bank of India (RBI) to check the flow of credit on the basis of its quality, i.e., on the basis of the repayment capability of the person who has taken the loan or on the basis of the purpose for which the loan is taken from commercial banks, they are called qualitative or selective credit control measures.

The RBI generally uses three types of selective credit control instruments:

- Margin money:** This implies the minimum margins (say, 30% of the loan amount) to be kept by the borrowers with commercial banks while borrowing money against specific



withdrawals from commercial banks. In case of secured or low-risk loans, the margin requirement is kept at a low level.

- (b) **Credit authorisation** : This shows the ceiling on the amount of credit for certain purposes (which needs prior sanction of the RBI).
- (c) **Differential Rates of Interest (DRI)** : This scheme relates to the discriminatory interest charged on certain loans of advances provided by commercial banks (i.e., interest at lower rates of interest on loans given to the poorer sections of the people).

Q. 43. State two differences between a Central Bank and a Commercial Bank.

Ans. : The following are the two differences between a Central Bank and a commercial bank.

- (a) The Central Bank of a country has the sole authority to print money but a commercial bank does not possess any such authority.
- (b) The Central Bank acts as banker to the Government and it also functions as a banker to all commercial banks. A commercial bank, on the other hand, is a banker to the general people who deposit money or take loans from such a commercial bank.

Q. 44. What is Statutory Liquidity Ratio? How this instrument can be used by the Central Bank, say, the Reserve Bank of India to check inflation?

Ans. : Apart from the cash reserve requirements, all commercial banks in India under the Banking Regulation Act (1949), are to maintain liquid assets in the form of cash at hand, cash with other banks, gold and unencumbered approved securities equal to not less than 20 per cent of their total time and demand deposits with the RBI. This is known as 'Statutory Liquidity Ratio (SLR)'.

$$\text{SLR} = \frac{\text{Cash at hand} + \text{Cash with other banks} + \text{gold} + \text{approved securities}}{\text{Total Time and demand deposits}}$$

The RBI was empowered to raise this ratio up to 40 per cent.

It was observed that the RBI raised this SLR continuously during the plan periods, to check inflationary pressures. An increase in SLR would mean a fall in the loanable funds with the commercial banks. So, that will check the flow of credit money, and hence, the inflationary pressure.

Q. 45. What do you mean by Cash Reserve Requirements (CRR)? How this credit control instrument can be used by the Central Bank, say, the RBI to check inflation and deflation?

Ans. : According to the RBI Act, 1934, every commercial bank had to keep a certain minimum cash reserve with the Reserve Bank of India (RBI). This is known as Cash Reserve Requirements (CRR).

The RBI increases this cash reserve requirements during inflation. With a rise in the CRR, the amount of loanable funds with the commercial banks declines. Thus, the process of credit creation by the commercial banks is checked. It reduces the flow of money and the aggregate demand in an economy. Hence, inflationary pressure is checked. Similarly, the RBI reduces this CRR at the time of deflation.

Q. 46. Explain any two credit control measures adopted by the Central Bank, say, the Reserve Bank of India (RBI) to check inflation.

Ans. : At the time of inflation, (i.e., increasing trend in the general price level), the RBI can take the following two credit control measures:

- (a) The RBI can raise the bank rate, i.e., the interest rate at which the commercial banks borrow credit money from the RBI; and



(b) The RBI can raise the Cash Reserve Requirements (CRR) (i.e., the proportion of total deposit, which a commercial bank has to maintain with the RBI).

With these measures, the amount of loan sanctioned by the commercial banks would fall. This reduces the purchasing power of the people. Hence, an income demand condition, which also creates inflationary pressures, is checked to some extent.

Q. 47. Mention any two credit control measures which the Central Bank, say, the Reserve Bank of India (RBI) has adopted to check deflationary conditions in the economy.

Ans. : At the time of economic deflation or depression, an income supply condition is created in the economy, leading to a continuous fall in the general price level, investment, income and employment. To check this tendency, the RBI has adopted the following two credit control measures:

- (a) The RBI has reduced the bank rate, (which is followed by a fall in the lending rate, i.e., the interest rates charged by the commercial banks while lending money to its customers); and

(b) The RBI has reduced the Cash Reserve Requirements (CRR), so that the loanable funds with the commercial banks are increased. As a result, commercial banks become capable of giving more loans to the investors. This leads to an increase in production, income and employment opportunities in the economy. Additional income generates additional demand for various products.

Q. 48. Distinguish between primary deposit and derivative deposit.

Ans. : If any person or institution, out of its own initiative, deposits some amount of money with a commercial bank, this is called primary deposit with the bank. However, if the commercial bank gives loan to any individual or institution, then an account is opened by the bank against the name of that individual or institution. This is known as derivative deposit.

Q. 49. Mention any two factors which restrict the process of credit creation by the commercial banks.

Ans. : There are some factors which restrict the process of credit creation. Two such factors are:

- (1) The proportion of total deposits which the commercial banks are to maintain as cash reserve with the Central Bank (if the Central Bank increases this cash reserve ratio then it restricts the capability of commercial banks to extend credits).
- (2) If a condition of economic depression prevails in the economy (when the entrepreneurs do not want to invest more, and are reluctant to take fresh loans from the banks).

Q. 50. If the Cash Reserve Ratio (CRR) maintained by the commercial banks is 12.5 per cent, and if the initial increase in deposit at any commercial bank is ₹ 100, what would be the total deposit created by the banking system as a whole?

Ans. : The relationship between total deposit creation, initial increase in deposit at any commercial bank and the CRR is expressed as:

$$\begin{aligned} \text{Total deposit created} &= \frac{\text{Initial rise in deposit}}{\text{CRR}} \\ &= \frac{100}{12.5\%} = \frac{100}{0.125} = ₹ 800 \end{aligned}$$

Q. 51. Mention any two roles of the commercial banks in the economic system.

Ans. : Banks are supposed to be the vital part of any modern economic system. Here, we can mention the following two important roles played by banks in an economic system:

- (a) **Encouraging savings** : People keep their savings in banks. This increases the savings in the general public. So, the expansion of the banking system stimulates savings in an economy.
- (b) **Mobilisation of savings for investment** : Banks also help the process of economic development in an economy, through the mobilisation of small savings and channelising the same in productive investment. Thus, banks do the job of collecting savings from savers and lending them out to investors for productive purposes.

Q. 32. Differentiate between SLR and CRR.

Ans. : Both CRR and SLR are the quantitative credit control instruments used by the RBI.

Cash Reserve Ratio (CRR)	Statutory Liquidity Ratio (SLR)
1. It is the ratio of a minimum cash reserve to total deposits that every commercial bank has to keep with the Reserve Bank of India (RBI).	1. It is the ratio of liquid assets (in the form of cash in hand, cash with other banks, gold and approved securities) to the total time and demand deposits that commercial bank has to maintain as per the RBI.
2. The RBI can vary the CRR between 3-15%.	2. The RBI can vary the SLR between 20-40%.

Q. 33. Explain the term credit multiplier.

Ans. : The amount of total deposits created by the banking system as a whole as a result of an initial increase in the primary deposit, is called the credit multiplier. If the initial increase in primary deposit = ₹ 100, and the total deposit created by all commercial banks = ₹ 500, then credit multiplier = $\frac{500}{100} = 5$.

Q. 34. How does fixation of margin requirement on secured loan by the Central Bank of India affect the flow of credit in the economy?

Ans. : As a part of the selective or qualitative credit control policy, the Reserve Bank of India fixes the margin required on secured loan provided by any commercial bank. This money policy aims at either restricting the flow of credit in some sector (by fixing high margin money requirement) or encouraging the same in some priority sector (by fixing low margin requirement, say, on loan given to small and marginal farmers).

Q. 35. Differentiate between fixed deposit and recurring deposit.

Ans. : In case of fixed deposits, the depositors are to keep the amount of money with any commercial bank for a specified period and earn a given interest rate per annum.

However, in case of recurring deposits, the depositors have to keep a fixed sum of money per month with any commercial bank. The accumulated amount alongwith accrued interest thereon is repaid by the bank to its depositor after the maturity period.

Q. 36. Mention any five reasons for setting up the Central Bank, say, the Reserve Bank of India.

Ans. : The principal reasons for setting up the Reserve Bank of India were:

- To supervise and monitor the activities of different commercial banks in the economy, and
- To control the supply of credit in the economy so that the objective of economic growth along with price stability can be achieved.



Q. 37. State two qualities of a good monetary unit.

Ans. : The two qualities of a good monetary unit are:

- It should be acceptable to all and act as a medium of exchange, and
- It should be easily used to measure the value of different quantities of goods and services.

Q. 38. How is money different from credit money?

Ans. : The money is different from credit money in the following ways:

Money	Credit money
1. It is a medium of exchange and issued by the Central Bank of the country.	1. It is created by the state commercial banks by giving loans to their clients.
2. It is a legal tender (i.e. rupee notes and coins).	2. It is not a legal tender (i.e., one may not accept payment through cheques drawn on any commercial bank).

Q. 39. Distinguish between qualitative and quantitative credit control policy of the Central Bank.

Ans. : Some of the differences between the qualitative and quantitative credit control policy of the Central Bank are as follows:

Quantitative Credit Control	Qualitative Credit Control
1. This credit control measure aims at regulating the total volume of credit in an economy.	1. This measure aims at controlling the flow of credit in some selected or particular sectors of the economy.
2. It regulates the availability of loanable funds with the commercial banks and controls investment in all the sectors of an economy.	2. It regulates the flow of credit from the commercial banks on the basis of the purpose of investment or the credit-worthiness of the borrower.
3. This control measure uses the instruments like bank rate, cash reserve ratio, statutory liquidity ratio, open market operation etc.	3. This measure uses the credit control instruments such as margin money, differential rates of interest, etc.
4. This measure affects equally the backward and advanced sectors of an economy.	4. This measure encourages the flow of credit in some priority sectors and does not affect the backward rural economy of a country.
5. This measure is more suitable for a developed economy.	5. This measure is suitable for a less developed economy.

Q. 40. What is meant by unlimited legal tender?

Ans. : The currency notes and coins of higher denominations, which are backed by the legal orders of the government, are to be accepted by the citizens of the country to settle claims of any value. So, these currency notes and coins of higher denominations (say, ₹ 5 coin, ₹ 10 or ₹ 100 currency notes etc.) are considered as unlimited legal tender.

Q. 41. What is meant by 'repo rate' and 'reverse repo rate'?

Ans. : If there is excess demand for liquidity (or money) in the economy then the Reserve Bank of India purchases government securities from the commercial banks (with a repurchase



agreement) for a very short period (say, 7-14 days), and in turn, gives credit facilities to commercial banks. Here, the interest rate charged by the RBI is called as the 'repo rate'. On the other hand, when the RBI wants to pump out excess liquidity from the market then it sells government securities to the commercial banks (with a repurchase agreement) for a very short period. In this case, the interest rate offered by the RBI on these securities is called as the 'reverse repo rate'.

Q. 62. Explain the overdraft facility given by banks.

Ans.: When any commercial bank allows an account holder to withdraw a sum of money in excess of the amount deposited with the bank, it is called an overdraft facility. Usually, the depositors with a current account get this facility. However, they have to pay an interest on the excess withdrawn.

Q. 63. What is meant by High-powered money? What is money multiplier?

Ans.: The High-powered money (H) refers to the monetary base of an economy. It comprises of the currency in circulation (C) and reserves held with the Central Bank (R). Thus the High-powered money is described as: $H = C + R$.

Now the reason which it is called so that an increase in monetary base leads to increase in the money supply at the multiplicative rate called money multiplier. The money multiplier can be expressed as: $m = \frac{1+a}{a+b}$, where a is the currency-deposit ratio and b is the reserve-to-deposit ratio.

Q. 64. How will the money multiplier change if the central bank raises the required reserve ratio?

Ans.: An increase in required reserve ratio by central bank will make the commercial banks to hold a greater portion of their deposits as reserves with central bank. As a result, the commercial banks will be able to make fewer loans than before and hence will contract the multiplier effect of change in monetary base on money supply. Thus the value of money multiplier will fall following the rise in the required reserve ratio.

Q. 65. How will the money multiplier change if the people raise their cash holding relative to deposit?

Ans.: An increase in cash holding relative to deposit by people will make the commercial banks available with fewer deposits than before. As a result the commercial banks will be able to make fewer loans and henceforth, will pave way to the contraction of the multiplier effect of change in monetary base on money supply, leading to a fall in the value of money multiplier.

Q. 66. How will the Central Bank change policy rates if the inflation rate in the economy rises due to some demand-pull factor?

Ans.: The policy rates administered by Central Bank influences the cost of credit in the economy. If there is a rise in the inflation rate in the economy then ideally the central bank will act in such manner that it can stem the excess demand. Now given an increase in policy rate will raise the cost of credit and thereby will make all credit-financed spending dearer. In face of rise in inflation rate due to some demand-pull factor the central bank will resort to raising the policy rates.

Q. 67. Explain the notion of 'liquidity' of an asset.

Ans.: The ease or low cost with which any asset can be converted into cash is considered as the liquidity of that asset. Thus, gold ornaments might be more liquid than a landed property.



Q. 68. What is 'full-bodied money'?

Ans.: A type of commodity money in which the commodity itself circulates as money is called as full-bodied money. For instance, silver or gold coins can be considered as full-bodied money. The monetary value of full-bodied money becomes exactly equal to its non-monetary value.

Q. 69. What is commodity money?

Ans.: When various commodities function as the medium of exchange (say, cowrie shells, hides and leather etc.), then those commodities are called as commodity money. However, they face the problems of improper standardisation, indivisibility, difficulty in storing etc.

Q. 70. Indicate some of the liabilities of a commercial bank as reflected in its balance sheet.

Ans.: The balance sheet of a commercial bank reflects the financial condition of that bank at a particular point of time (say, as on 31st March, 2021). Some of the liabilities of any commercial bank are:

- The share capital or the paid-up capital contributed by the shareholders of the bank;
- The reserves and surplus created out of the undistributed profit of the bank over years, and it is a liability of the bank to its shareholders;
- The deposits with the bank (say, the deposits made by the account holders of the bank in their respective savings and current accounts).

Q. 71. Indicate some of the assets of a commercial bank as reflected in its balance sheet.

Ans.: The balance sheet of a commercial bank reflects the financial condition of that bank at a particular point of time (say, as on 31st March, 2021). Some of the assets of any commercial bank are:

- Bank credit to the government and commercial sectors;
- Cash in hand;
- Balances with the Central Bank etc.

Q. 72. Suppose that monetary base is ₹ 25,000, reserve deposit ratio is 0.08, currency-deposit ratio is 0.3. Find the total money supply in the economy.

Ans.: We know,

$$M = \left\{ \frac{\beta+1}{\beta+a} \right\} H$$

$$\text{So, } M = \left\{ \frac{0.3+1}{0.3+0.08} \right\} \times 25,000$$

$$= \frac{1.3}{0.38} \times 25,000 = 3.42 \times 25,000 = 85,500$$

Where,

M = money supply, H = monetary base, β = currency-deposit ratio, a = reserve deposit ratio.

Q. 73. Suppose that the required reserve ratio is 0.10 for deposits and there are no excess reserves. Suppose also that the total demand for currency is equal to 0.3 times deposits.

- If the total reserve is ₹ 30 billion, what is the level of money supply?
- By how much will the money supply change if RBI buys Government bonds worth ₹ 1 billion from the open market?

Ans.: (a) Let M = money supply, H = monetary base, β = currency-deposit ratio, a = reserve-deposit ratio.



So, here $u = 0.10$ or $\frac{\beta}{\beta+1} = 0.1$ where R = total reserves, and D = total deposits.

or, $D = R/0.10$ or, $D = 50/0.10$ Thus, $D = 500$ billion.

Again, $C = 0.3 \times D$

or, $C = 0.3 \times 500$

or, $C = 150$ billion

So, $M = C + D = 650$ Billion

- (b) If RBI buys Government bonds worth ₹ 1 billion from the open market then monetary base rises by ₹ 1 billion.

We know,

$M = [D(1 + \beta)/(\beta + \alpha)] H$ where H = monetary base and M = total money supply. Here, $\beta = 0.3$

So, $\Delta M = \left[\frac{\beta+1}{\beta+\alpha} \right] \cdot \Delta H = \left[\frac{0.3+1}{0.3+0.10} \right] \times 1 = 3.25 \times 1 = 3.250$ billion.

- Q. 74. Suppose the cash-reserve ratio of commercial bank is 1/4 and the currency-deposit ratio of the public is also 1/4. Under this condition, if the government takes a loan of ₹ 150 crore from the Central Bank and spends all of it, then by how much will the money supply increase?

Ans.: We know that money multiplier (mm) = $\left[\frac{\beta+1}{\beta+\alpha} \right]$

Here, $\beta = \frac{1}{4} = 0.25$ and $\alpha = \frac{1}{4} = 0.25$

So, $mm = \left[\frac{\beta+1}{\beta+\alpha} \right] = \frac{1.25}{0.5} = 2.5$

If the government takes a loan of ₹ 150 crore from the Central Bank and spends all of it then it raises the monetary base of the economy by ₹ 150 crore. So, $\Delta H = 150$

We know, $M = mm \times H$

Or, $\Delta M = mm \times \Delta H = 2.5 \times 150$

So, $\Delta M = ₹ 375$ crore.

- Q. 75. What is complete deposit multiplier?

Ans.: Given the values of α , β and γ if there is a change in the high-powered money (denoted by ΔH) then the resultant change in total deposits with the commercial banks (denoted by ΔD) would indicate the complete deposit multiplier. This is shown below:

$\Delta D = \frac{1}{(\alpha + \beta + \gamma)} \Delta H$ where α = required reserve to total deposit (D) ratio, β = currency-deposit ratio, and γ = Desired excess reserve ratio of the commercial banks.

- Q. 76. What is complete currency multiplier?

Ans.: Given the values of α , β and γ if there is a change in the high-powered money (denoted by ΔH) then the resultant change in currency held by the public (denoted by ΔC) would indicate the complete currency multiplier. This is shown below:

$\Delta C = \frac{\beta}{(\alpha + \beta + \gamma)} \Delta H$ where α = required reserve to total deposit (D) ratio, β = currency-deposit



ratio and γ = Desired excess reserve ratio of the commercial banks. Here, the complete currency multiplier is $\frac{\beta}{(\alpha + \beta + \gamma)}$

- Q. 77. If $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$ then determine the complete deposit multiplier.

Ans.: Here, the complete deposit multiplier would be $\frac{1}{(\alpha + \beta + \gamma)} = \frac{1}{(0.2 + 0.25 + 0.05)} = 2$ where α = required reserve to total deposit (D) ratio, β = currency-deposit ratio, and γ = Desired excess reserve ratio of the commercial banks.

- Q. 78. If $\alpha = 0.2$, $\beta = 0.25$ and $\gamma = 0.05$ then determine the complete currency multiplier.

Ans.: Here, the magnitude of the complete currency multiplier would be:

$\frac{\beta}{(\alpha + \beta + \gamma)} = \frac{0.25}{(0.2 + 0.25 + 0.05)} = \frac{0.25}{0.5} = 0.5$ where α = required reserve to total deposit (D) ratio, β = currency-deposit ratio, and γ = Desired excess reserve ratio of the commercial banks.

- Q. 79. What is complete money multiplier?

Ans.: The complete money multiplier shows how the money stock in the economy will change consequent upon a change in the high-powered money given the values of α = required reserve to total deposit (D) ratio, β = currency-deposit ratio, and γ = Desired excess reserve ratio of the commercial banks. It is expressed as: $\Delta M = \left[\frac{1 + \beta}{(\alpha + \beta + \gamma)} \right] \Delta H$. So, the complete

money multiplier is $\left[\frac{1 + \beta}{(\alpha + \beta + \gamma)} \right]$

- Q. 80. Indicate four determinants of money supply in an economy.

Ans.: The following are the determinants of money supply in an economy:

- The required reserve to total deposit (D) ratio (α) of the commercial banks;
- The currency-deposit ratio (β);
- The desired excess reserve ratio of the commercial banks (γ); and
- The monetary base or the High-Powered money (H).

Among these determinants α and H are considered as the Central Bank's determinants of money supply; γ is considered as the commercial banks' determinants of money supply; and β is regarded as the determinant of money supply related to the behaviour of common public.

- Q. 81. What is meant by portfolio management of any commercial bank?

Ans.: The portfolio management by any commercial bank implies how a commercial bank manages its assets and liabilities so as to earn the highest possible profit. This portfolio management has the following four major elements: (i) Liquidity management, (ii) Asset management, (iii) Liability management and (iv) Capital adequacy management.

- Q. 82. What is meant by liquidity management of any commercial bank?

Ans.: The major concern for any commercial bank is managing the deposit outflows on a day-to-day basis. Thus, a commercial bank should have enough ready cash or liquid asset to meet the demand for cash withdrawals by the account holders. Cash is supposed to be the most liquid asset of any bank. Thus, the liquidity management of any commercial bank implies the maintenance of such liquid asset that would meet the liquidity requirement of the bank in an efficient way.



Q. 83. Explain in brief the notions of 'liquidation approach' and the 'going concern approach' towards asset management by any commercial bank.

Ans.: The asset management policy on the part of any commercial bank suggests that the bank, through its lending policy, should acquire such assets which have lower default risk. There remain two main approaches to such lending policy of a bank: (i) the 'liquidation approach' or 'real bills' doctrine and (ii) the 'going concern approach'. The 'liquidation approach' emphasises upon lending against some 'self liquidating' assets such as commodities or gold. The 'going concern approach', on the other hand, puts greater emphasis upon the future cash flows from the project which is financed through bank loan.

Q. 84. What do you mean by Tier-I capital and Tier-II capital of any commercial bank?

Ans.: The Tier-I capital constitutes of equity capital and retained earnings of the commercial bank. It measures the financial health of a bank. On the other hand, Tier-II capital includes subordinated debt, hybrid capital (say, the convertible debentures), the subordinated debt (where the borrower is expected to repay the borrowed amount after the repayment of all other corporate debts in case of insolvency) etc.

Q. 85. Give any two measures regarding the estimation of leverage of any commercial bank.

Ans.: Whenever the assets of a bank exceed its equity base, that bank is considered to be 'leveraged'. The debt-equity ratio in the portfolio of the bank determines its financial leverage. This leverage of any commercial bank can be estimated in two ways as shown below:

$$\text{Tier-I leverage ratio} = \frac{\text{Tier-I capital of the commercial bank}}{\text{Total assets of the bank}}$$

$$\text{Debt-equity ratio} = \frac{\text{Total debt capital of the commercial bank}}{\text{Total equity capital of the commercial bank}}$$

Total assets of any commercial bank includes Cash and balances with the Central bank, loans with other banks, investment in securities, loan and advances, fixed assets and other assets.

Q. 86. Why does a commercial bank adopt a leveraging mechanism?

Ans.: If the commercial bank borrows more (by issuing, say, certificate of deposits or by discounting the approved securities with the Central Bank or other financial institutions etc.) with a view to enhance its returns, the leverage of the bank would be higher i.e. debt-equity ratio will rise or Tier-I capital leverage ratio would fall from the prescribed standard fixed on the basis of Basel norms. The bank expects that by leveraging, the interest paid on the borrowed capital will be smaller than the return generated from the investment of that capital, thus improving the bank's performance.



Assignment

Short Answer Type Questions

1. Define money.

(See Q. Bank, Q. No. 1)

2. What are the estimates of 'realistic' money in an economy?

(See Q. Bank, Q. No. 2)

a. What do you mean by broad money?

(ICU, BA/BSc. (G), Sem-V, 2021)

b. Define broad money.

(ICU, BA/BSc. (G), Sem-VI, 2022)

(See Subsection 1.3.1)

3. What is High Powered Money?

(See Q. Bank, Q. No. 3)

(ICU, BA/BSc. (G), Sem-V, 2021)



4. What is money?

(See Q. Bank, Q. No. 1)

5. State two functions of money.

(See Q. Bank, Q. No. 2)

a. State two contingent functions of money.

(See Q. Bank, Q. No. 3)

6. What are the different components of the supply of Money?

(See Q. Bank, Q. No. 2)

a. Give three constituents of money supply.

(See Q. Bank, Q. No. 2)

b. Explain the meaning of M_1 and M_2 supply of money.

(ICU, BA/BSc. (G), Sem-V, 2021)

c. What is M_2 component of money supply.

(See Section 1.4.1)

7. What is a bank?

(See Section 1.4.1)

8. What are the different types of banks?

(See Section 1.4.1)

a. State two functions of commercial banks.

b. 'The process of multiplication of bank deposits through extension of loans and advances' refers to which function of a commercial bank?

(See Q. Bank, Q. No. 2)

9. Give two important factors limiting the volume of credit creation by commercial banks.

(See Q. Bank, Q. No. 4)

10. What is a Central Bank?

(See Q. Bank, Q. No. 1)

11. What do you mean by 'broad money' in an economy?

(ICU, BA/BSc. (G), Sem-V, 2021)

(See Subsection 1.3.1)

12. What is meant by standard of deferred payment?

(See Q. Bank, Q. No. 2)

13. Mention two differences between the Central Bank and any commercial bank of a country.

(See Q. Bank, Q. No. 4)

14. What is derivative or derived deposit?

(ICU, BA/BSc. (G), Sem-V, 2021)

(See Subsection 1.3.4)

a. Distinguish between primary deposit and derivative deposit.

(See Q. Bank, Q. No. 4)

15. What is credit multiplier or deposit multiplier?

(ICU, BA/BSc. (G), Sem-V, 2021)

a. If CRR is 5%, what will be the value of money multiplier?

(ICU, BA/BSc. (G), Sem-V, 2021)

(See Q. Bank, Q. No. 3)

b. What is narrow money?

(See Q. Bank, Q. No. 2)

c. What is money multiplier?

(See Q. Bank, Q. No. 2)

d. What happens to money supply if the value of money multiplier rises?

(See Q. Bank, Q. No. 2)

(ICU, BA/BSc. (G), Sem-VI, 2021)

16. How is money different from credit money.

(See Q. Bank, Q. No. 3)

17. Mention any two indications of the expansion of the banking services in India during the post-reform period.

(See Section 1.5)

18. What do you mean by NPA of the commercial banks in India?

(See Section 1.5)

19. Specify two categories of assets created by the commercial banks through their loan-giving operation.

(See Section 1.5)

20. Distinguish between gross NPA and net NPA.

(See Section 1.5)

21. Define gross NPA ratio and net NPA ratio.

(See Section 1.5)

22. What is meant by sterilisation?

(See Subsection 1.3.6)

23. How does central bank of country move to a situation of deficit in external sector led by contraction in export?

(See Subsection 1.3.6)

24. Mention two foremost features of Indian Banking System.

(See Subsection 1.4.1)

25. What are the two principal weaknesses/structural shortcomings of Indian Banking System?

(See Subsection 1.4.2)

26. Mention two difference between scheduled and non-scheduled commercial banks. (See Subsection 1.4.1)



28. Indicate two functions of commercial banks.
(See Subsection 1.4.1)
29. Mention any two reasons behind the importance of commercial banking in facilitating economic development.
(See Subsection 1.4.1)
30. Mention two financial reasons behind the persistence of non-performing asset problem with Indian banking sector.
(See Subsection 1.4.2)
31. Indicate the consequences of elevated non-performing asset issue for economic growth in India.
(See Subsection 1.4.2)
32. State any two impact of growing NPA on scheduled commercial banks in India.
(See Subsection 1.4.2)
33. State any two steps taken by government to control NPA with commercial banks in India.
(See Subsection 1.4.2)
34. What do you mean the prudential norms to be followed by commercial banks in India?
(See Subsection 1.4.3)
35. Mention two rationale behind the initiation of reform in Indian banking sector.
(See Subsection 1.4.3)
36. Mention any two prescriptions of Narasimham Committee (1991) as for the banking sector reform in India.
(See Subsection 1.4.3)
37. Indicate any two recommendation of Narasimham Committee (1990) as on the banking sector reform.
(See Subsection 1.4.3)
38. What is meant by CRR?
(See Subsection 1.4.4)
39. Indicate two implications of Basel III accord as on the capital adequacy of commercial banks.
(See Subsection 1.4.4)
40. What do you mean by Corporate Debt Restructuring?
(See Subsection 1.4.4)
41. Indicate one distinction between Strategic Debt Restructuring and Corporate Debt Restructuring.
(See Subsection 1.4.4)
42. Name the two institutions overseeing insolvency resolution as under Insolvency and Bankruptcy Code (IBC).
(See Subsection 1.4.4)
43. What is SARFAESI Act?
(See Subsection 1.4.4)
44. What are the fundamental parameters that RBI uses to indicate the risk exposure of any banking institution as under the scheme of Prompt Corrective Action?
(See Subsection 1.4.4)
45. Indicate two distinctive features of public and private sector banks.
(See Subsection 1.4.5)
46. What is PLR?
(See Subsection 1.4.5)
47. Indicate two differences between PLR and BCLR.
(See Subsection 1.4.5)
48. What is meant by MCLR?
(See Subsection 1.4.5)
49. What do you mean by inflation targeting monetary policy?
(See Subsection 1.4.5)
50. Mention two differences between LAF and MSF.
(See Subsections 1.4.5 & 1.4.10)
51. What do you mean by Liquidity Adjustment Facility (LAF)?
(See Subsection 1.4.5)
52. Define Cash Reserve Ratio (CRR).
(See Subsection 1.4.4)
53. What do you understand by CRR?
(See Subsection 1.4.4)
54. What is the full form of SLR?
(See Subsection 1.4.4)
55. What is SLR?
(See Subsection 1.4.4)
56. Distinguish between CRR and SLR.
(See Subsection 1.4.4)
57. Mention the names of two nationalised banks in India.
(See Section 1.4)
58. What is repo rate?
(See Subsection 1.4.4)
59. Define repo rate.
(See Subsection 1.4.4)



60. Which Committee is associated with the financial sector reforms in India in the 1990s?
(See Subsection 1.4.3)
61. State any two objectives of financial sector reforms in India.
(See Subsection 1.4.3)
62. State any two policies which facilitated financial sector reforms in India during 1990s.
(See Subsection 1.4.3)
63. Give any two arguments for financial sector reforms in India.
(See Subsection 1.4.3)
64. Give any two arguments against financial sector reforms in India.
(See Subsection 1.4.3)
65. What is leveraging?
(See Subsection 1.3.15)
66. What is bank rate?
(See Subsection 1.4.4)
67. What are the qualitative instruments of monetary policy?
(See Subsection 1.4.4)

Long Answer Type Questions

1. Explain the concepts of demand for and supply of money in an economy.
(See Section 1.3)
2. Explain different measures of money supply.
(See Subsection 1.3.1)
3. With a short note on the measures of money supply in India.
(See Subsection 1.3.1)
4. What do you mean by supply of money? Discuss different measures of supply of money. What is high-powered money?
(See Section 1.3 & Subsections 1.3.1, 1.3.2)
5. Discuss the process of the creation of credit money by the commercial banks. Is there any limitation of this process?
(See Subsection 1.3.4)
6. What do you mean by High-Powered money?
(See Subsection 1.3.1)
7. Explain the concept of money multiplier.
(See Subsection 1.3.1)
8. Discuss briefly the concept of money multiplier, adding a short note on its derivation.
(See Subsection 1.3.1)
9. Show that money supply is equal to money multiplier times monetary base.
(See Subsection 1.3.1)
10. What is money? Distinguish between 'Narrow Money' and 'Broad Money'.
(See Subsection 1.3.1)
11. Explain the concept of high-powered money. If there is an increase in the high-powered money, what will be its impact on the total supply of money?
(See Subsections 1.3.1, 1.3.5)
12. Explain the concept of Bank. What are the features of Indian Banking System?
(See Section 1.4 & Subsection 1.4.1)
13. List the weaknesses of the Indian Banking System.
(See Subsection 1.4.2)
14. What are the different types of Banks? Explain each type briefly.
(See Section 1.4)
15. List the important functions of Commercial Banks.
(See Subsection 1.4.17)
16. Discuss the importance of commercial banks in India.
(See Subsection 1.4.17)
17. With a short note on 'Structure of Commercial Banking System in India'.
(See Subsection 1.4.15)
18. Distinguish between scheduled Commercial Banks and Non-scheduled Commercial Banks in India.
(See Subsection 1.4.16)
19. Explain the function of the Reserve Bank of India.
(See Subsection 1.4.4)
20. Explain the role of Central Bank in controlling the flow of credit in an economy in order to combat inflation.
(See Subsection 1.4.4)



15. Give an account of the development functions of the Reserve Bank of India. (See Subsection 1.3.1.)
16. Give an outline of the methods of credit control of the Reserve Bank of India. (See Subsection 1.3.2.)
 - in. Discuss the various methods of credit control as followed by the Reserve Bank of India. (See Subsection 1.3.2.)
 - ii. What are the instruments of Credit Control of RBI? (ICU, BA/BSc. (H), Sem-VI, 2021) (See Subsection 1.3.2.)
17. Define open market operations. How the central bank control credit of the commercial banks through open market operations? (See Subsection 1.3.2.)
18. State the limitations of the open market operations. (See Subsection 1.3.2.)
19. How the RBI control credit through variable reserve ratio method? (See Subsection 1.3.2.)
20. State the limitations of the Variable Reserve Ratio of the RBI. (See Subsection 1.3.2.)
21. Distinguish between open market operations and Variable Reserve Ratios. (See Subsection 1.3.2.)
22. What are the limitations of the Quantitative methods of credit control of the Central Bank. (See Subsection 1.3.2.)
23. State the limitations of the Qualitative methods of credit control of the Central Bank. (See Subsection 1.3.2.)
24. Give an account of Supervisory and Regulatory Role of the RBI. (See Subsection 1.3.2.)
 - in. Give a brief account of the supervisory role of the Reserve Bank of India. (See Subsection 1.3.2.)
25. Distinguish between Quantitative and Qualitative Credit Control Methods of the RBI. (See Subsection 1.3.2.)
26. What are the impediments to the effectiveness of the monetary policy of the RBI? (See Subsection 1.3.2.)
27. Discuss the objectives of the Monetary Policy of the Central Bank. (See Subsection 1.3.2.)
28. Examine the recent changes in the monetary policy as it followed by the RBI. (See Subsection 1.3.2.)
 - in. Discuss the recent changes in monetary policy of the RBI. (ICU, BA/BSc. (H), Sem-VI, 2021) (See Subsection 1.3.2.)
29. Evaluate the monetary policy of the RBI. (See Subsection 1.3.2.)
30. What is meant by the Marginal Cost of Funds based lending rate? Explain the need for the introduction of such lending rate in India. (See Subsection 1.3.2.)
31. Explain the concept of sterilisation as an instrument of offsetting the monetary effect of exchange rate intervention by central bank. (See Subsection 1.3.2.)
32. Give a brief account of evolution of Indian Banking System during the post-inform period. (See Section 1.3)
33. Explain the rationale for the reforms in Indian banking sector and indicate some critical aspects of such reform. (See Subsection 1.3.3.)
34. Examine the problem of NPA with Indian Commercial Banks as a hindrance to economic growth. (See Subsection 1.3.3.)
35. Examine the roadmaps to banking sector reform in India. Indicate the implications of such reform as for the operational efficiency and financial health of commercial banking system. (See Subsection 1.3.3.)
36. Explain reasons underlying the persistence of NPA with commercial banks. Indicate the corrective measures being adopted in this regard against it. (See Subsection 1.3.3.)
37. Briefly explain the recommendations of Narasimham Committee I & II as on banking sector reforms in India. (See Subsection 1.3.3.)
38. Examine the implication of financial sector reforms in India during 1990s. (See Subsection 1.3.3.)
 - in. Discuss the major recommendations of the 1st and 2nd Narasimham Committee. How far these recommendations guided banking sector reforms in India? (ICU, BA/BSc. (H), Sem-VI, 2021) (See Subsection 1.3.3. & 1.3.5.)



39. Critically examine the changing structure of Indian Commercial Banking system in the recent time as under the initiative of government towards bank consolidation. (See Subsection 1.3.3.)
40. Give a critical evaluation of the bank merger programme undertaken by the government of India as an integral part of banking sector reforms policy. (See Subsection 1.3.3.)
41. Show the relationship between accounting of money supply and the balance sheet of commercial banks. (See Subsection 1.3.3.)
42. Explain different multipliers of the commercial banking system. (See Subsection 1.3.3.)
43. Explain the concepts of (a) complete deposit multiplier, (b) complete currency multiplier, and (c) complete money multiplier. (See Subsection 1.3.3.)
44. Explain the determinants of money supply from the following view points: (a) Central Bank's determinants of money supply, (b) determinants of money supply related to the banking system, and (c) determinants of money supply related to the behaviour of common public. (See Subsection 1.3.3.)
45. Explain the concepts of (a) exogenous money supply curve and (b) endogenous money supply curve in an economy. (See Subsection 1.3.3.)
46. Discuss the assets and liabilities of a commercial bank on the basis of the balance sheet of the commercial bank. (See Subsection 1.3.3.)
47. Write short notes on:
 - (i) Balance sheet of a commercial bank. (See Subsection 1.3.3.)
 - in. What is balance sheet of a business organisation? Describe the balance sheet of a commercial bank. (ICU, BA/BSc. (H), Sem-VI, 2021) (See Subsection 1.3.3.)
 - (ii) Liabilities of a commercial bank. (See Subsection 1.3.3.)
 - (iii) Assets of a commercial bank. (See Subsection 1.3.3.)
48. Explain the following aspects of portfolio management by a commercial bank:
 - (i) Liquidity management; (ii) Asset management; (iii) Liability management; and (iv) Capital Adequacy management. (See Subsection 1.3.3.)
49. Why should the commercial banks be regarded as special institutions? Explain. (See Subsection 1.3.3.)
50. How do the commercial banks act as leveraging mechanism? Explain. (See Subsection 1.3.3.)
51. What are the main types of risk associated with the operation of a bank? Explain. (ICU, BA/BSc. (H), Sem-VI, 2021) (See Subsection 1.3.3.)
52. Give a brief idea on the structure of balance sheet of RBI. (ICU, BA/BSc. (H), Sem-VI, 2021) (See Subsection 1.3.5.)





Financial Institutions and Financial Markets

2.1. Introduction

The financial markets are the integral part of a financial system. These financial markets consist of money market and capital market. Money Market is one of the important segments of the financial system in an economy. It is an institutional arrangement that facilitates movement of short-term securities with a maturity period of one year or less. In Indian Financial System, money market, which is regulated by the Reserve Bank of India, plays an important role in short-term financial transactions. In this chapter, we shall discuss about the instruments traded in Indian Money Market as well as regarding the participants of this market.

2.2. What is Finance ?

Before entering into the domain of a financial system, we must have a clear idea regarding the term 'Finance'. We often come across three closely connected variables, viz. 'money', 'credit' and 'finance'. There are some differences between these variables. While 'money' refers to the medium of exchange prevailing in the economy, 'credit' normally denotes a particular sum of money that has to be returned to the lender along with the interest amount.

The term 'Finance', on the other hand, implies monetary resources comprising both debt and ownership funds of any individual, business enterprise and the government.

Thus 'finance' can be defined as the 'science of managing money'. While giving a definition of 'finance', Howard and Opton stated in their book 'Introduction to Business Finance' that finance signifies 'that administrative area in all of administrative functions in an organisation which relates to the arrangement of cash and credit, so that the organisation may have the money to carry out its objectives satisfactorily as possible'.

In a similar fashion, Wheeler also defined 'Finance' as 'that business activity which is concerned with the acquisition and conservation of capital funds in meeting the financial needs and overall objectives of business enterprises'. In a broad sense, 'finance' is the provision of money at the time it is required not only by the individuals and business enterprises but also by the government.

■ **Rudimentary Finance** : A rudimentary finance signifies an early stage of financial development in an economy. It is characterised by the following features : (i) 'money' is considered as the only financial asset, (ii) people in the society do not have any option to have financial assets other than 'cash', (iii) there remains no financial intermediary which can act as a bridge between the savers and the fundseekers or investors.

However, with the gradual development of financial environment in an economy, the constraints created by such rudimentary finance can be overcome gradually with the development of new financial assets, financial institutions, financial markets and the financial market regulators.

2.2.1. Types of Finance

Direct finance in a financial system signifies that finance which is raised by the business organisations directly from the general public by issuing securities or raising loans from them with the help of

various investment vehicles and stock exchanges. In this method, funds are made available from the savers directly to the deficit economic units without the help of intermediaries such as financial companies, mutual funds etc. Thus, in case of direct finance, the advantages of intermediaries (as already noted in section 2.2) can be overcome with the advantages of (a) New financial assets such as shares and debentures issued by the ultimate borrowers ; (b) The financial institutions at the time of investment; lenders or lenders (who help the ultimate borrowers, say, the industrial firms, to arrange their own issues of shares and act as intermediaries, i.e. giving an assurance to enhance the (investor shares) ; (c) The financial market in the form of a stock market (where the already sold shares of different companies can be traded further).

In the method of financing, various financial assets are issued by the corporate organisations for raising funds from the general public. Such securities are equity shares, preference shares, debentures, etc. Companies raise capital needed for expansion of their business from the market with the help of banks, underwriters and investment bankers. They facilitate the issuing companies to raise funds by issuing their securities conveniently at a low cost. The market where funds are raised from the issuing companies is known as the primary market or 'new issues market'. After issuing the securities, companies may list their securities in a recognised stock exchange and create opportunities for trading. This stock market is known as secondary market. In the direct finance method, funds can be raised by the companies conveniently. They can deploy these funds for making investment in various projects. In this method of raising funds, resources get mobilised speedily and get deployed in the industries. Capital formation takes place. However, direct financing may suffer from the following drawbacks:

- The method becomes effective only in the matured stock market conditions.
- The rate of participation of general people in stock market may be very poor. So, this method does not become so much effective in developing countries like India, Nepal, Bangladesh etc.
- Small organisations may not be able to afford this system.

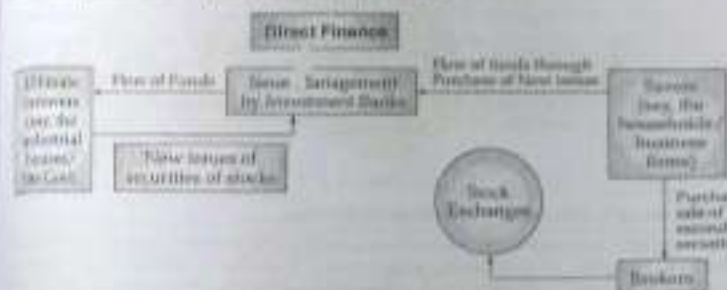


Chart - 1

■ **Indirect Finance** : In this method, funds are raised by the business houses through some intermediaries, such as, mutual funds, insurance companies, etc. They provide long-term finance to the savers from the corpus created by selling their units, policies, etc. These institutions have a credibility across the country and raise sufficient amount of funds from the households and put these funds available for industries. In this way, they ensure speedy capital formation in the society.

Financial intermediaries render host of financial services to the savers. These are discussed below.

- 1. Professional management:** Most of the retail investors do not have sufficient knowledge about the financial markets. They need the help of experts. Intermediary financial institutions are managed by professionals having optimum level of knowledge and skill to manage the funds raised by these institutions efficiently. They make investment strategies and invest the funds very prudently. Small investors investing their hard-earned money reap the benefits of such investments.
- 2. Diversification:** Small investors with meagre amount of investible funds are not able to diversify the portfolio rationally. Intermediary institutions raise huge amount of funds from the general public and invest these funds across various sectors. A delicate diversification of funds ensures reduction of overall risks of portfolio and establishes a steady return to investors.
- 3. Lesser degree of risks:** These institutions are managed by professionals having high level of knowledge and skill about the financial markets. As a result, they are able to take prudent investment decisions. It helps to reduce the overall risks of investment to a great extent.
- 4. Higher returns:** Over a medium to long-term investment horizon, investors are able to get higher returns from the investment made in these institutions.
- 5. Tax relief:** By investing in these institutions, investors get some tax benefits. As a result, tax liability gets reduced to some extent. Tax adjusted returns from their investments come to a great extent. It also enhances the disposable income of the people. It bolsters up the effective demand in the country.



Chart - 2

2.2.2 Relevance of Finance In an Economic System

Finance is the life blood of business. Without adequate amount of finance normal operations of a business are disrupted. In an economy, huge amount of finance is needed for infrastructural development and for other purposes. Due to lack of infrastructural facilities, industrial development and overall economic development cannot be attained. The role of finance is discussed below.

- 1. Life blood of business:** Finance is the life blood of business. Commercial activities cannot flourish without adequate amount of finance. As a result, economic development suffers.
- 2. Inducement to savings:** Several financial assets are found in an economy. People save their surplus amount of income after expenditure in various financial assets available in the system in order to earn interest and dividend. Thus, finance encourages people to save.
- 3. Working capital finance:** Working capital in a business is required to keep the wheels of such business running. Shortage of working capital hinders the normal operations of a business.

Banks and other financial institutions provide working capital loans to the entrepreneurs for efficient running of their businesses.

Establishment of Industries: Developing countries put more importance on manufacturing industries. It requires huge amount of funds to be deployed. Finance available in the surplus sector of the economy is made available to the manufacturing concerns through some mechanism. So, adequate amount of finance helps to develop industries in the country.

Judicious usage of natural resources: Extraction of the natural resources of the country and their effective utilisation for industrial use require sufficient amount of finance. Due to paucity of finance, natural resources of a country cannot be extracted and used optimally. So, adequate amount of finance ensures optimum usage of natural resources.

Creating employment opportunities: For expansion of industries and to set up new industries, sufficient amounts of finance are required. If the source of finance is ensured, industrial development in the country can be attained. It generates enough employment opportunities in the country.

Creation of financial assets: Finance creates various financial assets in the economy. These financial assets render various services to the industries. Corporate organisations raise loans by issuing various types of securities. Those who purchase such securities provide finance in return. To them these securities appear as financial assets ready to give returns. On the other hand, the institutions or companies which issue such securities obtain finance from the market.

Economic development: An economy cannot prosper without having adequate amount of source of finance in industry, trade, commerce, agriculture and other economic activities. Finance helps to invigorate the economic activities and help to spur the economic development in the country.

Payment mechanism: Money plays a pivotal role in the exchange of goods and services. Finance serves as a payment mechanism in exchange of goods and services. So, economic transactions take place smoothly due to the availability of adequate finance in the economy.

Spirit of the trade, industry and commerce: Prof. Van Home said that "finance is the oil of the wheels of the business. When a constant flow of finance to the business is ensured, the entrepreneurs taking moderate amount of business risks create wealth for the stakeholders."



Chart - 3

2.2.3. Financial System: Its Meaning

A 'system' is considered to be a set of interconnected parts which function together in a particular fashion to attain some particular objectives.

The financial system refers to a set of activities which facilitates transfer of financial resources from the savers to the borrowers. Generally, the business enterprises and the government are considered to be the borrowers in an economy, while the individuals and households are regarded as savers. In any economy, these households (or individuals), business enterprises and the government are considered as economic agents since economic activities are performed by these agents.

These economic agents are categorised into three groups:

(a) **The deficit spending units:** The consumption and planned investment expenditure exceed their incomes.

If Y = Aggregate income,

C = Aggregate consumption expenditure,

I = Aggregate investment expenditure

then in this case, $C + I > Y$

or $I > Y - C$

or $I > S$

where $S = Y - C$ = Aggregate savings.

Hence, the planned investment exceeds savings of these economic agents.

(b) **The surplus spending units:** Here, consumption and planned investment expenditure is less than their incomes. So, in this case,

$C + I < Y$

or $I < Y - C$

or $I < S$

Thus, the savings of these economic agents exceed their planned investment.

(c) **The neutral spending units:** Here, incomes are just sufficient to cover their consumption and investment expenses. So, in this case,

$Y = C + I$

or $Y - C = I$

or $S = I$

So, for these economic agents, their savings are just sufficient to cover the investment needs.

The financial system can be considered as a set of institutional arrangements through which surplus financial resources are mobilised from the savers (i.e. the surplus spending units) and are transferred to the investors (i.e. the deficit spending units).

According to Prof. Van Hise, "The objective of the financial system is to send effectively the savings of the economy to those users who will invest the savings in real wealth or will use it for consumption."

According to Robinson, "Financial system provides link between savings and investment for the creation of new wealth."

Financial system plays a pivotal role in the sustainable economic growth of a country. It acts as the intermediary that facilitates the flow of funds from the areas of surplus to the areas of deficit.



The financial system plays the key role in bringing out the concerted effort of the above factors in ensuring the flow of funds from the surplus areas to deficit areas. It serves as the epitome and synthesis of diversified financial activities.

Chart - 4

Financial System Cycle



From the above diagram (Chart - 4) it is clear that

- The Flow of Funds originates from the suppliers of funds who basically expect to derive—
 - income in lieu of their investments, and
 - claims established over the finance supplied.
- The flow of funds moves towards the seekers of funds who look for money or finance for investment in business and setting pace to their operational activities.
- The incomes, financial claims are returned to the providers of funds who get induced to invest further and to keep the cycle operative.

According to Prof. Van Hise, "the objective of the financial system is to send funds to the users who will invest the savings in real wealth or will use it for consumption."

According to Robinson, "Financial system provides link between savings and investment for the creation of new wealth."

2.2.4. Players in a Financial System

The principal participants in any financial system are:

- The financial institutions or financial intermediaries, e.g., commercial banks, non-banking financial companies (such as housing finance companies, merchant bankers, life insurance companies, etc.).
- Some special development finance institutions, e.g., the Industrial Development Bank of India (IDBI), the Industrial Finance Corporation of India (IFCI), the Small Industries Development Bank of India (SIDBI), etc.
- Regulatory Institutions, e.g., the Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI), etc.

- Institutional investors, e.g. the domestic and foreign institutional investors who purchase and sell securities in the stock market of a country;
- Individual savers and investors, e.g. a large number of households in India deposit their small savings with several commercial banks or use their savings in purchasing different types of financial assets;
- Other financial intermediaries such as the stock brokers and sub-brokers, depositaries, etc. A detailed discussion of these participants will be made in subsequent sections.

2.2.5. Component of a Financial System

The basic components of a financial system are :

- (1) Financial institutions;
- (2) Financial markets;
- (3) Financial assets (or instruments);
- (4) Financial services; and
- (5) Financial market regulators.

A coherence among these segments is needed for the smooth functioning of the financial system in any country.

- (1) **Financial institutions :** The financial institutions or intermediaries are supposed to be the most important constituent of any financial system. The main tasks of such institutions are to act as intermediaries —

- (i) in pooling up savings;
- (ii) allocating the pooled funds to alternative lines of production in an efficient way; and
- (iii) setting up a passage way or link between the fund seekers or investors and the users.

Financial institutions mainly include banking and non-banking financial institutions. While the banking institutions allow their customers to draw cheques against their demand deposits, the non-banking financial institutions do not allow this. So, the non-banking institutions do not participate in the payment mechanism of an economy. The non-banking financial institutions in India include Industrial Development Bank of India (IDBI), Industrial Credit and Investment Corporation of India (ICICI), Industrial Finance Corporation of India (IFCI), Small Industries Development Bank of India (SIDBI), State Finance Corporations (SFCs), Export-Import Bank (EXIM Bank), National Bank for Agriculture and Rural Development (NABARD), Mutual Funds and different insurance organisations etc. These banking and non-banking financial institutions "act as mediators and depositors of savings and purveyors of credit or finance".

Whereas the banking institutions (e.g. commercial banks) remain engaged in pooling money directly from depositors and lending that to borrowers or consumers, the non-banking institutions also remain engaged in making direct collection of funds from the depositors. They generally provide long-term capital to the borrowers.

Again, these financial institutions may be

- Financial — (i) intermediary institutions,
- (ii) non-intermediary institutions, and
 - (iii) other institutions.

The financial intermediaries accept deposits from the savers and the mobilised savings are then used for lending to the ultimate borrowers. Different commercial banks, non-banking financial companies (such as housing purchase and loan finance companies, housing finance

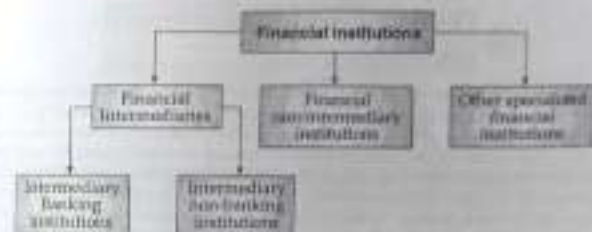
companies, etc.) mutual funds and insurance companies are considered as financial intermediaries.

(2) On the other hand, the financial non-intermediaries are also engaged in lending operations but their resources are not collected directly from the ultimate savers. Again, these financial institutions may simply be engaged in portfolio management, raw asset management, etc. for their clients. Here, the financial resources may be raised either by borrowing from the government or from the Central Bank or through government participation in the equity capital of these financial non-intermediaries (e.g. merchant banks, credit rating agencies, etc.).

(3) **Other financial institutions :** With the gradual expansion of trade and commerce, some other specialised financial institutions are established to facilitate that growth process. In India financial markets, e.g., these specialised financial institutions include National Securities Depositories Ltd. (NSDL), Central Depository Services (India) Ltd. (CDSL), Discount and Finance House of India (DFHI) etc.

Financial markets : A financial market is an institutional arrangement that facilitates trading of financial products under a particular policy framework.

Chart - 5



Financial markets may be classified on the basis of the length of the maturity period of the securities. For example, money market operates in dealing with short-term securities and capital markets deal in securities whose maturity period is one year or more. Financial markets act as the centres from which the facilities of buying and selling of assets, services and securities are performed. The funds of surplus economic units are made available to the deficit economic units and agents, brokers, dealers, borrowers, savers and lenders work together with an interplay of interest. Accordingly financial markets are broadly classified as —

- (i) Organised markets and
- (ii) Unorganised markets.

A definite set of rules and regulations exist for controlling financial transactions in an organised market. Definite institutions work there and they trade in definite instruments in such markets. In an unorganised market, there may be the absence of regulations to govern the financial dealings. Like the organised market the financial instruments are not standardised here.

Another classification of financial markets may be made as —

- (i) Primary market which deals with new issues (or shares) only, and whose common alternate name is NIM (New Issues Market).

- (ii) Secondary market which deals in old or second-hand securities. Different stock exchanges, e.g., BSE, NSE, etc. in India facilitate the trading of these stocks.

Chart - 4



- (iii) **Financial assets or Instruments:** A financial claim against a person or an organisation for payment at a specified future date of a sum of money or a periodic payment (such as interest or dividend) is known as financial instrument. It is an important element of financial system. Financial instruments are the financial assets or financial securities negotiable and tradable in the market. Financial instruments are of two types such as primary securities and secondary securities. Equity shares, preference shares, debentures, etc., are primary securities or primary instruments and bank deposits, mutual fund units, insurance policies are secondary instruments or securities. By hypothecating the financial instruments with the banks and other financial institutions the owner of the security can raise loans as and when required.

It is important to note in this connection that the financial securities issued directly by the non-financial economic units (i.e., the ultimate borrowers in the real sector) are considered as direct or primary securities. On the other hand, the indirect or secondary securities are issued by the financial intermediaries to the ultimate users. These securities are 'indirect' in the sense that in this case the ultimate borrowers (say, Tata Motors) do not borrow directly from the ultimate users.



Chart - 5



Financial assets can also be classified on the basis of the financial markets in which they are traded. Since the financial markets are broadly classified into money market and capital market, hence, the financial assets can be segregated into two groups: (i) money market instruments, and (ii) capital market instruments.

- (i) **Money Market Instruments:** These are short-term instruments with a maturity period less than one year. Following are the money market instruments:—
- Treasury bills, (ii) Call money, (iii) Commercial Paper, (iv) Certificate of Deposit, (v) Repo and Reverse Repo, (vi) Money Market Mutual Funds.
- (ii) **Capital Market Instruments:** Capital market instruments are the sources of long-term finance with a maturity period of more than one year. Following are the capital market instruments:—
- Equity shares, (ii) Preference shares, (iii) Debentures and bonds, (iv) Innovative debt instruments such as convertible debentures, floating rate bond, secured premium note, long discount bond, etc., (v) derivative instruments like forwards, futures, options and swaps.

Chart - 6



- (iii) **Financial Services:** Financial institutions or agencies that operate in a financial system under some set of services. Such services are needed for raising required funds and assisting action making related to the capital structure of a firm. Financial intermediaries facilitate quantum banking, hire purchase trading, leasing and credit rating, etc., that bring the investors close to the market. Regulatory bodies like the RBI, the SEBI, etc., govern the financial market and protect the investors' interests. Financial services may be subdivided into: (a) fund-based or asset-based services, and (b) fee-based or advisory-based services.

Fund-based services include lease financing, underwriting, discounting of bills before their maturity dates and re-discounting of bills, sponsoring hire purchase transactions, insurance policies, provision of venture capital, etc. Fee-based services include portfolio management services, technical and economic consultancy, credit rating, etc.

- (iv) **Financial Market Regulators:** Proper regulation of financial markets is a must for making market operations effective. Such regulations are also needed to protect the investors' interest, avenge suspicion and lack of transparency and to inject confidence in the investors' mind. Without proper regulations the development and maintenance of standard financial services are not possible. In India the financial market regulators are:—

- Ministry of Finance
- Reserve Bank of India (RBI)

- Securities and Exchange Board of India (SEBI)
- National Company Law Tribunal (NCLT)
- Insurance Regulatory & Development Authority of India (IRDA)
- Department of Corporate Affairs.

The main objectives of financial market regulators are:

- To establish well regulated and transparent financial markets in the country.
- To prevent illicit activities in the financial markets.
- To inject confidence in the minds of the investors.
- To bring transparency in the financial market operations.
- To frame and execute financial policies for regulating the participants of financial markets.
- To create a healthy environment in the financial markets.
- To ensure a speedy capital formation in the country.
- To provide the financial services in every nook and corner of the country.

Chart - 1

Components of Financial System



2.2.4. Functions of a Financial System

A sound financial system performs many important functions. These are listed below:

- Liability-asset transformation function:** When the banking institutions accept deposits from the public, these deposits are transformed to be a liability upon these banking



institutions. However, when they provide loans to their customers these loans represent an asset for the banking institutions. The process is known as the liability-asset transformation function of a financial system.

- Size transformation function:** A financial system can also reduce the average cost of financial transactions through large-scale operations. The banking institutions generally accept deposits of smaller denominations from a large number of small savers. However, they can be engaged in wholesale banking by providing large volume of credit to large borrowers. Thus, the pool of funds created out of small deposits can be transformed into large-scale deposits (or credit) of a considerable size. This process is called as the size transformation function of a financial system.

- Risk transformation function:** The financial intermediaries can also lower the risk involved in investment (based by small savers and investors) through proper diversification in their own portfolio. If the small savers and investors directly purchase the primary securities (i.e., the shares and debentures issued by any non-financial company), it involves high risk element as the market value of these primary securities may fall below their respective face value. The small savers or investors do not have enough fund to diversify their portfolio by spreading the risk. However, a financial intermediary can transform this high-risk element into low risk by issuing secondary securities (e.g., the units issued by the mutual funds) to small investors. This function is known as the risk transformation function.

- Maturity transformation function:** When the financial intermediaries accept deposit from the public, they offer the savers alternative forms of deposit (e.g., demand deposit, time deposits at varying maturity periods) to suit the liquidity preference of the depositors. On the other hand, when these financial institutions provide loans to the borrowers, the maturity periods are according to the requirements of the borrowers and the financial strategy followed by the financial institutions. Thus, the needs of both the savers and borrowers can be fulfilled by just considering the maturity periods of the amounts deposited by the savers to the maturity periods or the recovery periods of the loan amounts given to the borrowers.

- Payment function:** The financial system also provides a payment mechanism crucial for the extensive exchanges of goods and services in an economy. There are various modes of payment such as cash, cheques, credit and debit cards, internet banking, etc. The financial system facilitates individuals and business organisations to make their payments by removing the control and time barriers to settling any claim.

- Liquidity function:** A well organised financial system also facilitates the investors in liquidating their financial assets through trading in securities market. The ease with which any financial asset can be converted into cash is called as the liquidity of that asset. The financial intermediaries such as the stock exchanges, stock brokers and sub-brokers, depositors and depository participants, etc., facilitate the process of liquidating the financial assets.

- Financial deepening and broadening function:** Financial deepening refers to an increase in the variety of financial assets and an increase in the value of such financial assets as a percentage of the Gross Domestic Product (GDP) of a country. On the other hand, financial broadening refers an increase in the number of participants in financial markets (i.e., greater number of foreign institutional investors, banking and insurance companies, etc.). Thus, a sound financial system is instrumental in such financial deepening and financial broadening in an economy.

- Fiscal function:** The macroeconomic policies of the government in any country can be implemented properly through a sound financial system. For instance, the monetary policy of a country is implemented through the Central Bank of that country. Similarly, the fiscal policy of the government can be implemented in a better way through several banking institutions.

For instance, the present subsidy policy of the government of India has been implemented through 'direct benefit transfer' (DBT) of the subsidy amount to the bank account linked up with the Aadhar Number of the recipient.

Chart - 10



2.3. Financial Institutions

Financial institutions are those enterprises which collect savings from the savers and channelise the mobilised fund to the investors. Thus, they allocate the pooled fund in alternative form of productive activities in an efficient manner. So these financial institutions act as

(i) the 'mobilisers or depositors of savings' and

(ii) as 'providers of credit and loans'.

When these financial institutions mobilise savings, they issue financial claims against themselves. Again, when the mobilised savings are used for extending credit facilities their debt claims are purchased by these financial institutions from the borrowers. As opposed to non-financial institutions (i.e., the industrial and commercial business firms) which deal in real assets such as land and buildings, machinery and equipments, raw materials and semi-finished goods, etc., the financial institutions deal in financial assets such as deposits, loans, shares and debentures, etc.

Though the activities of these financial institutions often overlap, they can be classified on the basis of their primary activities or specialisation in providing any particular financial service.

These classifications are shown below:

- Financial intermediaries and non-intermediaries.
- Banking and non-banking financial intermediaries.
- Other specialised financial institutions.

2.3.1. Financial Intermediary Institutions

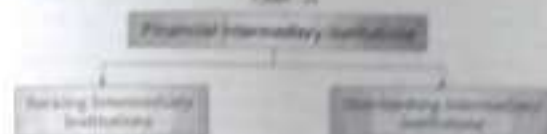
In an efficient financial system, money or funds move from the surplus economic units to deficit economic units with the help of intermediary institutions. These surplus funds of the surplus economic units get deployed by the deficit economic units for productive purposes and capital formation takes place in the economy. It is a continuous process through which the excess funds of the surplus economic units get deployed in an efficient manner for the production of various goods and services. This leads to speedy economic growth in the country.

Financial institutions which help to move the surplus funds of surplus economic units to the deficit economic units are known as financial intermediary institutions or financial intermediaries. Thus, it is an efficient channel for moving the funds from surplus economic units to deficit economic units.

Financial intermediary institutions are of two types –

- banking intermediary institutions, and
- non-banking intermediary institutions.

Chart - 11



Banking intermediary institutions play an important role in the process of transferring funds from the surplus economic units to the deficit economic units. Banks etc., the commercial banks, accept deposits from public and lend that funds to individuals and business firms for financing their economic capital.

Non-banking intermediaries accumulate the savings of the savers by selling their securities, bonds, etc., and lend that accumulated savings to the business firms for production in long-term periods. Examples of such institutions are Mutual Funds, Development Banks, Insurance Companies, Housing Finance Companies, Investment Banks, Stock Exchanges, Underwriters, Primary Dealers, Asset Managers, etc.

2.3.2. Functions of Financial Intermediary Institutions

Financial intermediary institutions play an important role in the financial system. They act as an efficient channel for channelising the funds from the surplus economic units to the deficit economic units and ensure effective utilisation of such funds for productive purposes. Functions performed by these institutions are as follows:

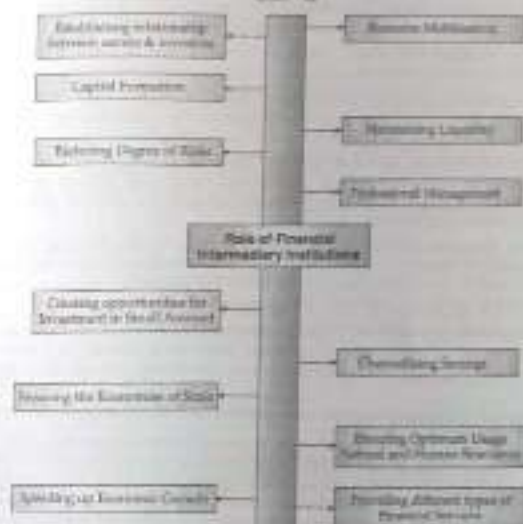
- Establishing a relationship between the savers and investors:** It is virtually impossible to establish direct contact between innumerable number of savers and investors in an economy. However, the financial intermediation establishes an indirect relationship between these savers and investors, and try to satisfy the interests of both savers and investors.
- Resource mobilisation:** Financial intermediary institutions raise funds by accepting deposits from it by selling their securities or units to the public. Surplus funds of the economic units get mobilised and transferred to the deficit economic units efficiently. In this way, resources of the economy are mobilised and they ensure prompt use of those resources for the economic development of the country.
- Capital formation:** These organisations provide short-term and long-term capital to the business organisations. A banking intermediary provides mostly working capital loans and a non-banking intermediary provides medium term and long-term loans to industry, trade and commerce. Funds raised by these institutions get effectively deployed in the production of goods and services, and capital formation takes place in the economy. Changes in the stock of capital it made possible through investment. Economic growth and prosperity of a country largely depends on speedy capital formation in the economy. Financial intermediaries act as catalysts in the financial system in synchronising saving-investment correlation.

4. **Maintaining liquidity:** Financial intermediary institutions maintain adequate reserves in the system. They invest the funds raised from the public very judiciously and ensure that the invested amount can be liquidated as and when required. Moreover, these organisations keep adequate amount of cash as reserves and provide finance to the industry, trade and commerce as and when demanded.
5. **Reducing degree of risks:** These institutions invest the depositors' or investors' securities market very diligently after conducting thorough research by the experts. Investment in the securities market involves great amount of risks. It is an expert's job. Common investors do not have the sufficient skill and knowledge to read the market trend. Investing in equities is not everybody's cup of tea. It requires huge amount of skill and knowledge. So, making direct investment in equities for an individual not having adequate expertise in this field is a risky proposition. On the other hand, these institutions employ experts having optimum level of skill and knowledge about the gamut of investing in the stock markets. They invest in various types of securities in a diversified way so that the overall risks can be reduced to a great extent. They take informed decisions and help to mitigate the overall risks relating to investments.
6. **Having professional management:** These organisations are run by professional managers. In order to take balanced and prudent investment decisions, these organisations appoint highly qualified and experienced personnel as fund managers. They put maximum emphasis on ensuring fair returns to the investors.
7. **Creating opportunities for investment in small amount:** These institutions such as mutual funds accumulate funds by selling their units to the general public and to other institutions. The funds so created by selling their 'units' are invested in equities and debentures. In a number of companies across various sectors such as FMCG (fast moving consumer goods), IT (Information Technology), capital goods, cement, banking and financial, amongst others, etc. People belonging to low income group may buy the units of mutual funds in small quantities depositing small amount of funds. In this way, individuals belonging to small income groups are able to invest their hard-earned money in small amount and can generate the returns on their investments.
8. **Channelising the savings:** Financial intermediary institutions play an active role in channelising the savings of the people as the effective investment opportunities. They act as the efficient medium for channelising the savings of the savers into the trade, industry and commerce and ensure the economic growth of the country.
9. **Ensuring the economies of scale:** These institutions build up huge amount of funds by selling their securities, units, policies or other assets. The corpus raised by them are invested in various securities available in the securities markets. As their scale keeps amount of funds and invest these funds in various securities across various sectors, average cost of management of these funds becomes less. These organisations enjoy economies of scale as they transact in large volumes. Economies of scale at operations enhance the return on investments. As a result, investors get higher rate of return on their investments.
10. **Ensuring optimum usage of natural and human resources:** These institutions provide sufficient amount of funds to the private sector and public sector enterprises. The business houses deploy these funds in their production of goods and services. As a result, natural resources as well as human resources of the country can be utilised in these organisations optimally.
11. **Providing different types of financial services:** These financial intermediary institutions also extend different types of financial services to their clients (persons like investors, discounting, acceptance & guarantees, insurance service etc.). These services are needed for the expansion of business and trading activities in an economy.



speeding up economic growth: These institutions fetch sufficient amount of funds from the surplus economic units. As deficit economic units smoothly finance, business houses get adequate amount of funds from these financial institutions and can deploy that fund in their businesses for productive purposes. As a result, economic activities in the country get flourish. It speeds up economic prosperity and growth in the country. As inclusive economic growth in the country ensures higher standard of living of the common people of the country.

Chart - 12



12.2 Financial Non-intermediary Institutions

There are some financial institutions which do not work as intermediary institutions like banks, insurance companies, etc. They provide medium-term and long-term credit to the industries but do not accept any deposit from the general public. They get their required fund either from the government authorities or other financial institutions. Some development banks in India such as Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), etc. are non-intermediary financial institutions. Apart from providing financial assistance these institutions also render advisory services and technical assistance to the industries.

As we already noted, these financial non-intermediaries may be engaged in portfolio management, new issue management, etc. on behalf of their clients.



• Functions of Financial Non-Intermediary Institutions

The main functions of financial non-intermediary institutions are discussed below.

- (1) **Making direct investments:** These institutions invest in shares and debentures of companies/organisations directly. So, they can directly invest in several investment projects undertaken by the corporate houses. They do not accept deposits from public. They get financial resources from the government and raise funds from the sale of their securities.
- (2) **Providing long-term loans:** These institutions provide long-term loans upto 20 years to the industries for the purchase of equipments, execution of projects, etc.
- (3) **Rendering technical assistance:** These institutions render technical assistance to big, industry and commerce for the execution of a particular project, for getting foreign aid, etc.
- (4) **Evaluating projects:** These institutions appoint experts for evaluating the investment projects undertaken by their clients. They help the entrepreneurs by evaluating the project and let them to take correct investment decisions.
- (5) **Acquiring capital from particular sources:** These financial institutions do not collect the required fund from the ultimate savers. Instead they acquire their required capital from various sources such as (i) loan from the government, (ii) selling their shares and debentures to big public and private organisations, etc.
- (6) **Providing financial support for industrial growth:** These financial institutions do provide adequate financial support to several corporate houses for activating the process of industrialisation in any country. They provide credit facilities both for establishing new industries, units as well as for the expansion and revival of existing units.
- (7) **Providing financial and technological consultancy services:** These financial institutions also provide both financial and technological consultancy services to different business enterprises for preparing and implementing new investment projects. These are fee-based services.

2.2.4. Distinction between Financial Intermediary and Non-Intermediary Institutions

Financial intermediary institutions, such as, commercial banks, cooperative banks, insurance companies, mutual fund houses, etc., channelise the savings of the public in the trade, industry and commerce by deploying the funds for productive purposes. They act as the efficient medium or intermediary by transferring the funds from the surplus economic units to the deficit economic units. However, the financial non-intermediary institutions do not accept deposits from public but they invest directly in trade, industry and commerce and render specialised services to the business firms.



The main points of distinction between these two are given below:

Points of Distinctions	Financial Intermediary Institutions	Financial Non-Intermediary Institutions
1. Definition	Financial Intermediary Institutions are those institutions which raise funds from public and provide credit to trade, industry and commerce acting as intermediary organisations.	Financial Non-Intermediary Institutions are those institutions which do not raise funds from the ultimate savers in financial market. They directly invest in trade, industry and commerce. They also render specialised non-financial services to business firms and directly invest in securities of the corporate organisations.
2. Method of raising	These organisations raise money from the savers and invest the money in various sectors.	These organisations buy securities of various companies directly out of their own funds.
3. Kind of services	These organisations mainly provide short-term, medium-term and long-term capital to trade, industry and commerce. Sometimes they render some specialised services to trade, industry and commerce.	These organisations provide an array of services to business firms such as providing capital, technical services, advisory services etc., to the management of companies, and so on.
4. Nature of transactions	Transactions of these institutions are voluminous.	Transactions of these institutions are not so large.
5. Acceptance of deposits or savings	These organisations accept deposits or savings from the general public.	These organisations do not accept deposits or savings from the general public.
6. Establishing a link between savers and borrowers	These institutions establish an indirect relationship between the savers and borrowers.	They do not help in establishing indirect relationship between savers and borrowers.
7. Instrumentation effect	These institutions can convert primary securities into secondary securities.	These institutions transact only in purchasing primary securities (i.e., share & debenture issued by different manufacturing companies).
8. Participation in payment mechanism	These institutions, particularly the banking intermediaries, participate in the payment mechanism of the economy (since the banking intermediaries allow their customers to draw cheques against their deposit accounts with these banks to settle any claim).	These institutions are not capable of participating in the payment mechanism of the economy.

2.2.5. Banking and Non-Banking Financial Intermediaries

Banking and non-banking financial intermediaries are the constituents of financial institutions. Though both these types of financial institutions are engaged in accepting or mobilising deposits from the public and lending the same to productive fields, there are basic differences in their operations.

Banking institutions allow their customers to draw cheques against their demand deposits and these cheques act like money. So, the demand deposits with the commercial banks are treated as an essential component of the money supply in an economy. These banking institutions can create 'new money' through their lending operations (i.e., by creating claims against themselves). The saving institutions, viz., the non-commercial banks as a whole, can create derivative deposits or credit worth more than the primary deposits collected from the savers. Hence, these banking institutions participate in the payment mechanism of an economy. They are also subject to a statutory cash reserve ratio to be maintained with the Central Bank of a country.

However, the non-banking financial intermediaries cannot create credit money, and hence, they do not participate in the payment mechanism of an economy. They are only the 'purveyors of credit'. They do not give the opportunity to their depositors to draw cheques against their deposits. The non-banking financial intermediaries (e.g., the Life Insurance Corporation of India, the General Insurance Corporation of India, etc.) Thus, the lending operations of these non-banking financial intermediaries are constrained by the resources collected from the savers.

2.3.6. Functions of Banking Financial Intermediaries

Banking institutions are the most important intermediary institutions in the financial system. They channelise the savings of the people into the trade, industry and commerce. They act as agents and conduits for mobilising the savings and convert these savings into the effective capital investment. The main functions of the banking intermediary institutions are discussed below:

- (1) **Accepting deposits:** Banks accept deposits from the general public by offering various types of savings schemes, such as savings deposit account, recurring deposit account, fixed deposit account, etc. Banks pay interest on these deposits. Savers may withdraw money from their deposit accounts as and when required.
- (2) **Providing short-term and medium-term loans:** Banks provide short-term and medium-term loans to trade, industry and commerce and other borrowers. They mainly provide working capital loans to the business firms. The banks charge interest rates on such loans depending upon the risks involved and repayment periods.
- (3) **Making investments:** Banking institutions buy shares and debentures of corporate firms. In this way, banks make their investments for long-term purposes.
- (4) **Acting as agents:** Banks act as agents of the customers. As per customer's instruction they transfer funds, collect money on behalf of the customers, purchase or sell securities, etc.
- (5) **Creating credit:** Commercial banks, by accepting deposits from public and granting loans to individuals and business firms, create credit money in an economy.
- (6) **Helping foreign trade:** Banking institutions also help the entrepreneurs who are involved in foreign trade. They provide foreign currency loans to the entrepreneurs for expanding the footprint in foreign countries.
- (7) **Promoting economic growth & development:** These banking institutions also participate in the process of economic development of a country by extending credit facilities to priority sectors (such as small and marginal farmers, small entrepreneurs, etc.), expanding branch offices in rural areas, supporting the development plans undertaken by the government, etc. As a result, economic growth of a country becomes sustained.
- (8) **Providing modern banking services to the customers:** In a growing and globalised economy, the banking institutions provide its customers with modern banking services such as internet banking, automatic banking or cash banking, 'any time money' (ATM) facility, 'bill and credit' cards, etc.
- (9) **Providing retail and wholesale banking facilities:** When the commercial banks provide relatively small amounts of short-term loans to a large number of customers, that type of banking business is called as retail banking (e.g., 1000 rupee durable loans, house loans, education loans, personal loans, etc.). However, some commercial banks may extend large amount of medium and long-term loans to a few large business houses. This type of banking operation is considered as wholesale banking. The commercial banks sector are engaged in both retail and wholesale banking, are called as 'universal banks'. The ICICI bank is considered to be the first universal bank in India that started its operation since 2007.

2.3.7. Functions of Non-Banking Financial Intermediaries

Non-banking intermediary institutions are those financial intermediary institutions which accept public deposits and issue funds by selling bonds, shares, units, policies, etc., and provide medium-

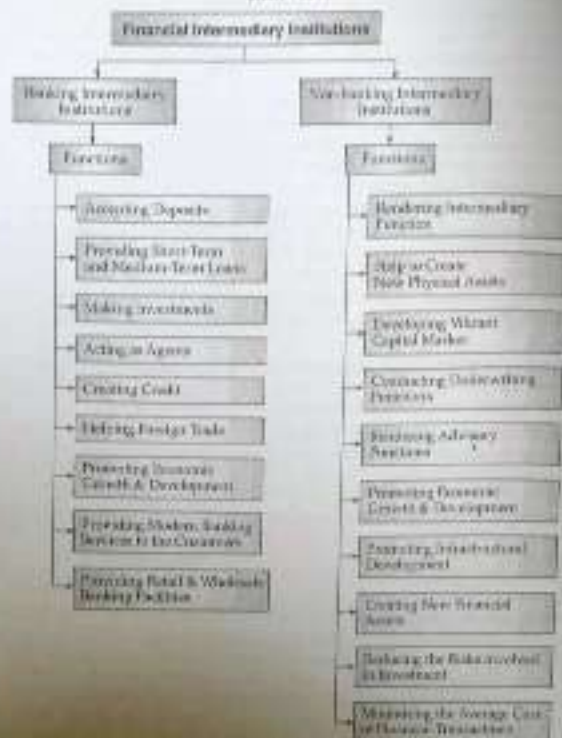
and long-term loans to business firms. They also buy shares and debentures of corporate institutions and provide capital to them. Merchant banks, insurance companies, housing finance companies, hire purchase and lease finance companies, mutual funds, etc., are the examples of non-banking institutions.

There are organised and unorganised non-banking intermediaries in our country. Merchant banks, insurance companies, etc., are the organised non-banking financial intermediary institutions. On the other hand, the private money lenders, indigenous bankers, mahajans, etc., are the examples of unorganised non-banking financial institutions. The main functions of non-banking financial institutions are:

- (1) **Pooling intermediary functions:** These institutions gather huge amount of funds from the public by issuing their units, bonds, policies, etc., and transfer those funds to the industry, trade and commerce for deploying that fund in productive activities. They play an important role for transferring the funds of surplus sector to the deficit sector and help the process of economic growth in the country.
- (2) **Help to create new physical assets:** Surplus funds in the economy are made available in the deficit sector through the activities of these institutions. Industry gets adequate amount of capital for execution of various projects, production of goods and services. As a result, new physical assets are created in the economy.
- (3) **Developing a vibrant capital market:** These institutions play active role in the capital market activities. They shoulder important responsibilities towards developing a vibrant capital market.
- (4) **Conducting underwriting functions:** These institutions act as underwriters when a company issues its securities in the primary market and help the issuing company to raise a large amount of capital from the new issues market.
- (5) **Rendering advisory functions:** These institutions are managed by experts and professionals having optimum level of skill and knowledge about the economy and the industry. They help the entrepreneurs by giving right advice in taking important decisions for their business such as expansion of business, acquisition of another business firm, sale of part of the business, etc.
- (6) **Promoting economic growth & development:** These institutions provide medium-term and long-term capital to the core industries (core industries comprise of industries such as pet, petroleum, cement, electricity, steel, textiles, crude oil, natural gas, etc.) on easy terms and conditions. These industries form the backbone of the national economy. Hence, these financial institutions discharge the important tasks of building and strengthen the core industries. So, they contribute towards economic growth and development of the country.
- (7) **Providing infrastructural facilities:** Adequate infrastructural facilities (roads, water supply, power generation, power distribution, telecommunication, industries, etc.) are essential for promoting economic growth of a country. These institutions provide capital to industries engaged in the development of infrastructural facilities in the country.
- (8) **Creating new financial assets:** When these non-banking financial intermediaries accept deposits from the savers under several deposit schemes, they issue promissory notes to the savers. For instance, the insurance companies issue insurance policies to the insured persons or subscribers. Further, the mutual funds create varieties of secondary securities, e.g., unit-linked fund, balanced fund, etc.
- (9) **Reducing the risks involved in investment:** These non-banking financial intermediaries can diversify their fund among more risky and less risky securities in a prudent manner. Thus, the risks are arising out of some investment can be counterbalanced by gains in some other securities. As a result, the small savers or investors who purchase secondary securities issued by these non-banking financial intermediaries are also benefited of lower risk in investments.

110 Minimising the average cost of financial transactions : Since these non-banking intermediaries invest a huge amount of fund in different projects simultaneously, they are able to get the economies of large-scale transactions. As a result, the customers of these financial institutions also get the benefit of low-cost financial transactions.

Chart - 13

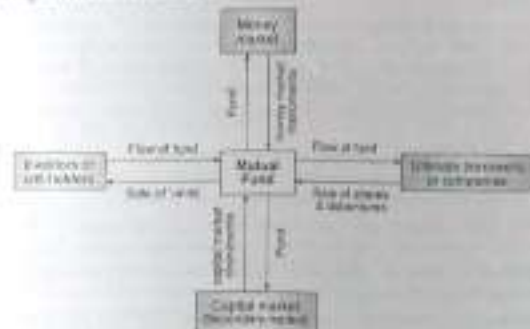


2.3.7(a). Mutual Fund : Non-banking financial intermediary

Association of Mutual Funds in India (AMFI) defined a mutual fund as "a trust that pools the savings of a number of investors who share common financial goal. Anybody with an investible fund can invest in mutual fund. These investors buy units of a particular mutual fund scheme. The fund has a defined investment objective and strategy."

According to SEBI Regulations, 1996, "Mutual fund means a fund established in the form of a trust to raise funds through the sale of units to the public or a section of public under one or more schemes for investing in securities, in accordance with Regulations."

It can be said that, a mutual fund is a trust that pools together the investments of a number of investors who share a common financial goal. Investors buy units of a fund and contribute funds to the fund manager who invests these funds judiciously and judiciously for creating a long-term wealth for the unitholders. So, a mutual fund is the most convenient form of investment opportunity for the investors and professionally managed fund house at a very low cost. A mutual fund is regulated with the SEBI.



A mutual fund serves as a link between the investor and the securities market by mobilising the savings of the investors and investing them judiciously in securities market to generate returns. Mutual funds play an important role in mobilising the savings of small investors and channelising them for productive investments in the India economy.

Functions involved in the formation and working of the mutual fund :

- Sponsor :** The sponsor means any person who sets up or in combination with another person or persons establishes a mutual fund.
- Trustee :** The sponsor formulates the mutual fund trust in keeping with the Indian Trust Act, 1882 and holds the property of the mutual fund.
- Capitalists :** It means a person who has been granted a certificate of registration to carry on business of custodian of securities under the SEBI Regulations. It holds the securities of the fund (Asset Management Company) in its custody.
- Asset Management Company (AMC) :** Fund house appoints the AMC to manage the fund of the unitholders. They become responsible to the trust for effective and efficient management of the fund.

2.3.7(b) Advantages Mutual Fund

Following are the benefits or advantages of investing money in Mutual Fund :

- Professional management :** Most of the retail investors do not have adequate knowledge of securities market operations and do not have huge resources to reap the benefits of investment. Hence, they require the help of the experts. Mutual funds are managed by professional managers who have the requisite skills and experience to analyse the performance of prospects of different companies. They make an organised investment strategy, which is hardly possible for an individual investor. So, small investors, by investing their funds in mutual fund, get professional advice at a minimum cost.

- (2) **Diversification** : An investor takes maximum risks when he invests all his funds in a single Mutual Funds invest in a number of companies across various sectors. This diversification reduces the overall risk of the portfolio.
- (3) **Liquidity** : In all open-ended funds, liquidity is provided by direct sales/repurchase of mutual fund and in case of close-ended funds, the liquidity is provided by listing the stock exchange.
- (4) **Transparency** : As per SEBI Regulations, all the mutual funds have to disclose their portfolio on a half-yearly basis. However, many mutual funds disclose this on a quarterly basis. Thus, an investor knows where his money is being deployed and in case he is not satisfied with the portfolio, he can withdraw his money at a short notice. The Net Asset Value (NAV) of the units are calculated on a daily basis in case of open-ended funds and are published in the newspapers.
- (5) **Low management cost** : No mutual fund can raise the management cost beyond the prescribed limit of 2.5% and extra cost of management is to be borne by the AMC or the Asset Management Company. So, administrative cost of mutual fund becomes lower.
- (6) **Highly regulated** : Mutual Funds are highly regulated institutions. In our country, SEBI regulates all the mutual funds and it ensures absolute investor's protection.
- (7) **Equity research** : Mutual funds can afford information and data required for investments. They have large amount of funds and equity research teams available with them.
- (8) **High returns** : Over a medium to long-term investment horizon, investors always get higher returns in mutual funds as compared to returns from other alternative fields.
- (9) **Tax benefits** : Its benefit schemes of mutual fund offer tax benefits to investors. More dividend received by the investors from equity fund is exempted from income tax U/s 10(3) of the Indian Income Tax Act.
- (10) **Flexibility** : Mutual Funds offer many schemes and investors have the options of transferring their units from one scheme to the other.
- (11) **Judicious investment in equities** : Investment in share market is not an easy task. It is not an everybody's cup of tea. It requires huge skill and expertise. To prevent the shortcomings of the market, to spot the potentials in the market and to identify the right stock, huge amount of skill and expertise are required. Mutual fund organisations appoint professional fund managers, who have the discerning eyes to spot the future potentials and to pick up the right stock. They take informed and rational investment decisions and thereby become able to create wealth for the investors.
- (12) **Capital appreciation** : Capital appreciation by investment in equities is possible only by investment in a disciplined manner. Speculations and irrational speculations are punished by the stock market. Mutual fund organisations provide the scope to the investors to invest their funds in a disciplined manner. i.e. by offering to invest in systematic investment plans (SIP). These mutual fund organisations help the investors to appreciate their capital in the long-run.
- (13) **Withstanding the market crisis** : Asset management companies (AMCs) which manage the assets of mutual fund can appoint the professional fund managers who have the ability to weather the storm in the finance market and thereby protect the interest of the investors. They are the experts in the capital market and know how to tackle the unfavourable weather in the finance market and safeguard the investors.
- (14) **Investment in SIP Funds** : An investor can invest in the mutual fund through the systematic investment plan or SIP route in order to beat the market volatility. In the long run, investors can create wealth by investing through SIP route. As little as ₹ 500 or ₹ 1,000 can be invested per month through the SIP route and thereby small investors are encouraged to deploy their fund in the mutual funds.

Distinction between Banking and Non-Banking Financial Intermediaries

The following are the main points of distinction between banking intermediary institutions and non-banking financial institutions.

Points of Distinctions	Banking Intermediary Institution	Non-banking Intermediary Institution
Source of Funds	Banking intermediary institutions are those financial institutions which accept deposits from the public and provide credit to individuals and business firms.	Non-banking intermediaries are such institutions which raise funds from the public by issuing their units or securities and provide medium and long-term loans to trade, industry and commerce.
Role	They are the players of the organised sector.	They are the players of both organised and unorganised sectors.
Operations	They perform their functions in the money market.	They perform their functions in the capital market.
Creation of Credit	They are able to create credit in the money market by lending short-term credit to the borrowers.	They are not able to create credit money in the financial system.
Types of Deposits	They accept the following types of deposits: (i) Saving deposit (ii) Recurring deposit (iii) Fixed deposit	They generally accept fixed deposit or term deposit.
Regulation	They are regulated by the Central Bank of a country (e.g., the Reserve Bank of India).	They are regulated by the regulator of the capital market, e.g., the Securities and Exchange Board of India (SEBI), the Insurance Regulatory & Development Authority (IRDA) in India.
Credit Control	Credit created by this intermediary is controlled by the Central Bank of a country through its monetary policy.	The Central Bank can not control the amount of loan given to the borrowers by these institutions.
Withdrawal	Depositors can withdraw their deposits at any time by drawing cheques on their demand deposits and can withdraw money even before the maturity period of fixed deposits or recurring deposits.	Before the maturity period, deposit money cannot be withdrawn and the depositors do not get the facility of drawing cheques on their deposit accounts.
Types of Loans	Banks generally provide short-term or medium-term loans to the borrowers.	They provide medium-term and long-term loans to the trade, industry and commerce.
Purpose of Loans	Loans raised from banks are used by the business firms for meeting their working capital needs.	Loans raised from these institutions are used by the business firms for investing in their capital assets.
Payment mechanism	These institutions participate in the payment mechanism of the economy.	These institutions do not participate in the payment mechanism of the economy.
Statutory reserve	These institutions have to keep a certain portion of their deposits with the Central Bank of the country.	These institutions are not required to keep any statutory reserve with the Central Bank of the country.
Example	Commercial banks	Insurance Companies



2.3.9. Differences between Organised and Unorganised Financial Institutions

Organised financial institutions are the institutions of the organised financial market. They are subject to the specific rules and regulations of the apex regulatory bodies. However, the unorganised financial institutions are the institutions of unorganised financial market which is not governed by specific rules and regulations of any regulatory body. The main points of distinction between these two institutions are discussed below:

Points of Distinctions	Organised Financial Institutions	Unorganised Financial Institutions
(1) Definition	Organised Financial institutions are those which are regulated by the rules and regulations of the regulatory bodies.	Unorganised Financial institutions are those which are not governed by any regulatory body.
(2) Area of Activities	These institutions perform their activities across the entire spectrum of the financial system of the country. They spread their activities throughout the country as well as in the foreign countries.	These institutions perform their activities within a specific region. Their activities are confined within restricted areas.
(3) Maintenance of Books of Accounts	These institutions keep proper books of accounts as per the guidelines issued by the highest accounting body. The Institute of Chartered Accountants of India is the highest accounting body in India.	These institutions do not keep proper books of accounts.
(4) Publication of Accounts	Annual accounts of these institutions are published.	Accounts of these institutions are not published.
(5) Transparency	Activities of these institutions have transparency.	There is a lack of transparency activities of these institutions.
(6) Mortgage	These institutions provide credit to the borrowers after taking adequate amount of security in the form of assets as collateral.	Generally loan is provided by these institutions to the borrow people without taking any mortgage.
(7) Norms and Regulations	These institutions perform their activities adhering to the specific rules and regulations of the regulatory bodies.	There is no well specific regime to regulate the activities of these institutions. So, these institutions do not follow any specific rules and regulations.
(8) Registration	These institutions are registered under the specific regulatory bodies.	These institutions are not registered under any specific regulatory body.
(9) Volume of Transactions	Transactions which take place in these institutions are voluminous.	Transactions which take place in these institutions are relatively small.
(10) Examples	Banking, Mutual Fund, Finance, Development Bank, etc., are the examples of these institutions.	Mutual funds, Private money lenders, Informal money lenders, etc., are the examples of these institutions.

2.3.10. Financial System: Its Implications for Economic Development

Before analysing the link between the financial system and the economic development of an economy, we must differentiate between the meanings of 'economic growth' and 'economic development'. While economic growth signifies an increase in gross domestic product (GDP) or per capita GDP of a country, economic development implies a qualitative improvement in the standard of living of the common people. Thus, economic development not only includes an increase in per capita GDP but also an improvement in the opportunity of high literacy rate, reduced incidence of income inequality and poverty etc.



Although many economists and social scientists are sceptic regarding the role of a financial system in economic development of a country, there are views that indicate positive contributions of a thriving financial system towards economic development of a country.

- **a strong financial system helps in mobilising savings** : Several banking institutions can contribute positively towards the mobilisation of savings particularly in less developed or developing countries.
- **a vibrant financial system helps in channeling the mobilised savings towards selective investment** : The financial institutions or intermediaries act as important agents through which mobilised savings can flow in different investment projects.
- **a well-run financial system fosters the process of capital formation** : Capital formation means an increase in the physical stock of capital in an economy through investment. Such capital formation becomes possible only through the functioning of a strong financial system.
- **a strong financial system thus contributes towards the production and productivity growth in an economy** : Higher investment and capital formation can result in enormous increase in production and productivity in different sectors of the economy. It leads to an increase in per capita income too, it fosters economic growth which is an integral part of economic development.
- **a strong financial system contributes to higher employment and income opportunities** : An increase in investment and productive activities can lead to higher employment and income opportunities among the common people. It helps in the process of proper distribution of income among different sectors of the people. Thus, the incidence of poverty, unemployment and income inequality can be reduced to some extent. So, the country can progress towards the path of economic development.
- **a strong financial system helps in implementing the social security programmes and other development programmes of the government** : Several social security programmes that need direct benefit transfer (DBT) to the incumbents like the poor women, old age people, etc.) can be implemented successfully by the government with the help of social banking institutions. For instance, the subsidy amount can be directly sent to the bank account of a poor person (at present the 'Jan-Dhan' scheme of the government emphasises on this aspect). Financial help in the 'self-help groups' can be provided through these banking institutions. All such development programmes can help in reducing the income inequality among different sections of people.

Thus, a strong and a well-run financial system can actually foster the process of economic development of a country.

However, financial assets are supposed to be a part of investors' wealth but not the part of national wealth.

A financial asset usually shows a claim due. Such a claim may accrue to any individual or any organisation. As an example, we may refer to any share that might have been distributed among shareholders. As these are claims, they do not have any physical existence although these are not real assets. The investor can legally claim amount from his investment in future which do not constitute any property but which entitles him a right is a claim. It results from an asset owned and owned by the investor. When the wealth of the investor is to be computed, financial assets will not be added by sole with his tangible assets. For example, if a person has property and other tangible assets of ₹ 50 lakh, ₹ 7 lakh of invested shares of a company and ₹ 3 lakh invested in the debentures of a company, his total wealth should be considered as ₹ 50 lakh. Thus, such assets will be considered as a part of the investor's wealth. National wealth or national income is the aggregation of money value of the payments of goods and services produced in different sectors during any particular year. However, in national income estimation, the value of

stock traded in stock market or capital gains are not taken into account since these values are not vis-à-vis to current production.

Thus, financial assets and an increase in market value of these assets due to speculative behaviour and risk-taking motivations of the investors may raise the 'wealth of an investor' but this does not raise the national output or the net national income of a country.

Hence, it is often said that financial assets are part of investors' wealth but not the part of national wealth.

2.3.11. Financial System and Economic Growth

The views regarding the positive correlation between the well-functioning financial system and economic growth of a country come under rigorous scrutiny. Several economists and finance analysts opined that there may not be any direct relationship between economic growth and performance of the financial sector at an economy.

(a) Investment may not be towards socially desired directions: Theoretically speaking, a financial system can function in an efficient manner only under some restrictive assumptions of perfect knowledge and information, a perfectly competitive market structure, etc. In reality, the financial markets are often characterised by monopolistic or oligopolistic nature, asymmetric information, etc. Thus, growing transactions in financial markets or an increase in financial assets may not guarantee investment towards socially desired directions.

(b) No direct link between investors' wealth and national wealth: The 'Wealth effect' in financial markets or the speculative activities in financial markets may only lead to price volatility in the prices of securities in the stock market. Thus, stock index (say, the BSESENSEX or NSE NIFTY) or India may rise leading to significant increase in the market value of some financial assets. But that does not mean a simultaneous increase in 'real' output of the economy. Thus, capital gains made out of such speculative transactions in the financial market do not increase the 'wealth' of an individual investor, but that would not be considered as part of national wealth or national output. Any 'value' or 'income' which is not generated out of current production, is not included in national income estimation.

Hence, it is often said that 'financial assets are part of an investor's wealth, but not part of national wealth'.

(c) It exaggerates the role of capital formation: A financial system often exaggerates the role of capital formation in economic growth. But several empirical studies have shown that shortage of capital is not the single most constraint towards economic growth of a country. In fact, appropriate policies for reducing the wastage of capital, adoption of appropriate technology, proper allocation of resources, better socio-political order, etc. can generate higher growth with social justice.

2.3.12. Financial Development in India

The evolution of the Indian financial system can be divided into three phases:

(a) Phase - I (1947-81): This phase signifies a period during 1947-54, i.e., the post-independent financial system before the initiation of planned economic development. (The first five-year plan was initiated in 1951) in India. At that time period, the financial system was underdeveloped and it was incapable of supporting industrial and business enterprises due to inadequate number of financial intermediaries, financial services, financial assets, etc.

(b) Phase - II (1981 – mid-1990s): In this phase, Indian financial system experienced a gradual expansion of public sector financial institutions (say, the nationalisation of commercial banks during 1969 and 1980, establishment of some development banks, etc.). Some insurance companies like LIC and GIC were also nationalised. The funds provided by the financial institutions began to flow to various fields of productive investment and helped in building

macro-economic objectives of planned economic development followed by the government. (Interest rates and regulations were framed not only for the healthy growth of the corporate sector but also for protecting the interests of the investors too). Companies Act, 1956; Capital Issues (Control) Act, 1947; Securities Contracts (Regulation) Act, 1956; Foreign Exchange Regulation Act, 1973, etc.]

Phase III (mid-1990s to present day): In this phase, the financial system of India has gone through a fundamental change in the policy dimension. The new policy framework favoured privatisation, deregulation and a liberal financial environment. As a result, the reforms in the Indian financial sector reduced the role of government intervention in the Indian financial system. The objective was to make the Indian financial system more efficient and competitive in nature.

The basic structure of the Indian financial system will be discussed in the next section.

2.4. Major changes in Indian Financial System since 1990s

The structure of Indian financial system has undergone major changes since the introduction of the new economic policy in 1991. It may be described as the era of liberalisation and globalisation of Indian economy. The important developments which occurred during the post-reform era are mentioned below:

(1) Privatisation: Ownership pattern of many government-owned institutions were changed with the change in economic policy. Many financial institutions were set up with the concerted effort of the government and private financial institutions. Unit Trust of India (UTI), Mutual Fund Houses, State Finance Corporations (SFCs), etc. are such financial institutions that experienced such public-private initiatives.

(2) Operational autonomy to development banks: For ensuring a constant flow of capital to the corporate sector, the government of India took initiatives to give autonomy, independence and operational flexibility to the development banks. Industrial Development Bank of India (IDBI), Small Industries Development Bank of India (SIDBI), Industrial Credit and Investment Corporation of India (ICICI), National Bank for Agriculture and Rural Development (NABARD), etc. were given more autonomy and operational flexibility. Since then development banks have been performing very efficiently.

(3) Establishment of credit rating agencies: Credit rating agencies perform the tasks of credit rating. They assess the credit-worthiness of different financial instruments and gauge the associated risks with those instruments. They help the investors to take informed investment decisions in keeping with their risk-taking appetite. Some credit rating agencies were set up in collaboration with some foreign collaboration such as Credit Rating Information Services of India Ltd. (CRISIL), Credit Analysis and Research Ltd. (CARE), Investment Information and Credit Rating Agency (ICRA), etc.

(4) Establishment of Mutual Funds: The UTI Mutual Fund was established in India long back in 1963. It enjoyed a monopoly in running as a mutual fund up until 1991. Afterwards many private institutions were allowed to set up the Asset Management Companies (AMCs) and to engage themselves in the mutual fund business. Since then several financial institutions have come out and formed the asset management companies and started the mutual fund business. Gradually the mutual fund business has been flourishing in the Indian financial system and playing an important role in the system.

(5) Structural changes in the securities market: The structure of the Indian securities market has undergone a major change after the financial sector reforms. The primary market (that is, the New Issue Market) operations have been restricted to regulate the operations of the intermediaries such as underwriters, portfolio consultants, lead managers, etc. Secondary market operations were also restricted in order to bring transparency in the operations of the stock

market and to instil confidence in the minds of the investors to invest their money in the securities market. The government of India has set up Over the Counter Exchange of India (OCEI), National Stock Exchange (NSE) and the National Securities Depositories Ltd (NSDL). It is important to note that in case of OCEI established in 1989, and started functioning in 1992, there is no physical existence of a stock exchange, and the trade takes place directly between the buyers and sellers through internet.

- (8) **Reforms in the money market:** As per the recommendations of the Narasimham Committee for the development of Indian money market, the government of India has undertaken various reform measures. A number of reform measures were made in the banking sector as per the recommendations of that committee. Various innovative money market instruments were introduced by the RBI.
- (9) **Reforms in the insurance sector:** Initiative was taken by the government from early years to expand insurance business across the country. Private sector corporate organisations were allowed to promote insurance business in the country. In 1999, Insurance Regulatory and Development Authority (IRDA) Bill was passed in the parliament and IRDA was established as a regulatory body in the insurance sector. Since then private sector companies have been allowed to set up insurance business in the country with a minimum paid up capital of ₹ 100 crore. Since then insurance business has been developing gradually in the country.
- (10) **Foreign capital:** In 1983, Indian companies were allowed to raise capital from the foreign countries by issuing their securities. They may issue American Depositary Receipts (ADRs), raise funds from the American financial markets and Global Depository Receipts (GDRs) to raise funds from the other countries. As a result, Indian corporate organisations get an opportunity to raise capital comparatively at a lower cost from the developed countries.
- (11) **Establishment of the Securities and Exchange Board of India:** The Securities and Exchange Board of India (SEBI) was set up in 1988. In 1992, the SEBI Act was passed in the parliament. As per this Act, it became a statutory body to act as the apex regulatory body in Indian capital market. Since then it has been acting as a capital market watchdog to prevent the malpractices of the brokers, traders and other participants. It safeguards the interest of the general investors.
- (12) **Operational flexibilities of commercial banks:** In order to improve the profitability of public sector banks, several measures were taken such as allowing the banks to open new branches in unbanked regions, all-India merger of banks, allowing commercial banks to raise more capital by issuing their securities in order to maintain capital adequacy norms. As a result, profitability of commercial banks have increased gradually.

2.3.14. Weaknesses of Indian Financial System

A well regulated and vibrant financial system is a must for attaining sustainable economic development in the country. The pace of economic growth of a country depends on the effective functioning of a financial system. Indian financial system suffers from some weaknesses which need to be addressed properly by the government and the regulatory bodies. The highlights of Indian financial system are discussed below.

1. **Existence of unorganised money market:** Apart from organised money market, there exists parallel or unorganised money market in India known as Parallel System. The participants in unorganised money market (such as — maheshwari bankers, mahajan, raddi, etc.) are not regulated by the Reserve Bank of India (RBI) or by the government. They do not abide by the rules and regulations of the money market. Sometimes, it is seen that they actively dampen the effectiveness of monetary policies of the RBI.



2. **Unbalanced growth of banking system:** The branch offices of commercial banks are mostly situated in urban areas. Rural people do not get sufficient banking services. Till date about 8% of the adult people in rural areas do not have any bank account even.
3. **The limited growth of Indian banking sector hinders the mobilisation of savings in the economy:** Lack of banking services in the rural areas hinders the growth of unorganised collective investment schemes or joint schemes promoted by some non-cooperative societies with some selfish motives. As a result, common rural people lose their fingers by investing a huge amount. It reduces low rate of savings in the economy which ultimately requires the savings-investment dilemma.
4. **Corruptions and scams:** Indian financial markets have witnessed several financial scams, such as, Harshad Mehta Scam (1992), UTI Scam (1998), Satish Mehta Scam (2001) and many more. These scams in the Indian financial system damaged the sentiment of the general people. As a result, general people lost their confidence upon the financial markets for a while.
5. **Lack of monetary stability:** Indian money market witnesses too much volatility in interest rates and the foreign exchange rates. The RBI being the apex regulatory body in the Indian money market, adopts various tools through its monetary policies to control the persistently high rate of inflation. It tries to bring stability in the foreign exchange rate. But despite taking several measures, the RBI has not been successful fully in the regard.
6. **Lack of independence of the regulators:** Sometimes, it is seen that the regulators cannot function independently. High level officials of the regulators are often influenced by some political persons, bureaucrats, etc. As a result, their independence is lost in some cases.
7. **Lack of participation:** Per capita income of the people of our country is very low. So, the rate of savings is not encouraging. The lack of enthusiasm is kind of hindrance among the people (both low savings) to participate in the financial markets.
8. **Existence of black money:** Organised sector of the financial markets is under the strict control of the RBI, SEBI and the central Government. But the unorganised sector is beyond the control of the regulators. An unorganised sector generates black money in the system. It creates a parallel market in the system. Black money transactions have been increasing day by day. It may cripple the structure of the financial system. The central government should address the problem very seriously.
9. **Unbalanced growth of financial markets:** Growth of financial markets in India remains skewed. Rural India does not get sufficient financial services. Unbalanced growth of financial markets is the cause for not having a solid financial structure in India.
10. **Poor savings-investment correlation:** An efficient financial system pools the savings of the households and channels the savings into effective investments in the process of creation of net wealth. As the rate of household savings is too low in our country, financial institutions fail to collect and provide sufficient funds to the industries. For this reason, capital formation remains subdued. Thus, poor savings-investment correlation damages the economy as a whole.
11. **Low rate of savings:** Per capita income in our country is very low as compared to other emerging economies. The rate of household savings is also subdued. In an efficient financial system, household savings get channelised in a formal manner into productive investments. A low rate of savings affects the saving-investment dynamics adversely. Capital formation in the country is hampered.
12. **Lack of awareness:** Financial literacy among the people in the country is also very poor. Lack of financial literacy and awareness creates problem of mobilisation of savings and capital formation in the economy.
13. **Insufficiency of innovative financial assets:** Indian financial system fails to create sufficient amount of innovative financial assets. As a result, the general people do not get tempted to save in terms of financial assets other than liquid cash.

13. **Red tapism** : Public sector financial institutions are run with too much red tapism. It causes considerable delay in approving projects, sanctioning loans, etc. As a result, many projects are entangled. It hampers the rhythm and momentum of the industrial activities.



Chart - 34

2.3.15. Remedial for Overcoming Weaknesses of Indian Financial System

The Indian economy has got sufficient opportunities and potentials to grow at a higher pace. But as the Indian financial system contains several problems, Indian economy fails to prove its potentials. Due to several crises prevailing in the system it cannot attain higher economic growth. The biggest equity market investor in India Mr. Rakesh Jhunjhunwala once said that "there is crisis in the Indian financial system, but not crisis of the system". He opines that the fundamental structure of the financial system is buoyant but some loopholes exist there. He thinks that India can attain above 7% GDP Growth on a sustainable basis if these loopholes in the system get removed. The government of India must address the underlying problems of the economy and resolve these issues. Following measures may be taken by the government to accelerate the economic growth.

1. **Creating investment demand** : To move economic growth, priority must be given to create investment demand rather than creating consumption demand. Investment in infrastructure, housing and automobile sectors have multiplier effect and create demand in allied sectors. Investment-led growth will lead to unemployment. But consumption-led growth will not necessarily lead to investment. Various projects which are awaiting for government approvals and clearances should be given due weightage. This will provide an impetus to the economy as there is enough headroom for growth.
2. **Reducing red-tapism** : Indian financial system crumbles with the problem of red-tapism. It should be removed. Due to red tapism, project clearances get delayed and it leads to policy



analysis. A single window clearance system should be installed for approving various projects expeditiously.

3. **Bringing financial inclusion** : Inclusion should be given to financial inclusion. Most of the poor people even do not have any bank account. Rural India does not get sufficient amount of banking services. Insurance penetration is also very poor. So financial inclusion is a must. It will help to bring more people under the gamut of banking and insurance services.
4. **Establishing more banks** : More banking licenses should be given to establish private sector banks to expand the footprint of banking services across the country.
5. **Promoting economic reforms** : The government of India should adopt pro-growth economic reforms. It will accelerate the growth engine of the country and thereby per capita income can be enhanced.
6. **Promoting awareness** : Financial literacy and awareness of the general people are to be enhanced. It will ensure their aptitude towards investment in financial markets.
7. **Bringing co-ordination between fiscal policy and monetary policy** : A judicial coordination between the government's fiscal policy and RBI's monetary policy need to be developed. Harmonisation of these policies would help to attain the economic objectives of the government.
8. **Lessening undue pressure on regulators** : Indian financial regulators cannot often function independently. There are undue political pressures on the high-level officials of the regulatory bodies. So, they cannot act independently. It needs to be removed. Regulators should be given more powers and autonomy so that they can act independently.
9. **Introducing strong surveillance system** : Strong surveillance system should be installed to track and spot the illicit and unethical practices in the financial markets.
10. **Bringing tax structure reforms** : Tax structure which is much cruder. In respect of indirect tax reforms, introduction of Goods and Service tax (GST) will be a game changer, and in respect of direct tax reform, introduction of Direct Tax Code (DTC) is also needed. [The GST part of the indirect taxes will be subsumed into a single tax. It will remove the cascading effect of the multiple taxes which enhances the production cost. GST would enhance the competitiveness of the Indian industries. Mr. Rakesh Jhunjhunwala (India's biggest equity investor) once said that by introducing GST, India's GDP growth rate can be enhanced by 1.5% to 2% annually on a sustainable basis. The expeditious introduction of the Goods and Service Tax would reduce transaction costs and make the economy more competitive.]
11. **Controlling high rate of inflation** : Indian economy has been facing the onerous impact of the stubbornly high rate of inflation. High rate of inflation jeopardises the economic growth in the country. RBI should take strict measures to tame the high rate of inflation.
12. **Promoting inclusive economic growth** : The government should give priority to navigate the country towards a path of sustainable and inclusive economic growth.
13. **Reigniting investment cycle** : In order to revive the economic growth, investment sentiment has to be regenerated and the government will have to expeditiously do-better-than-the crises of the failed projects.
14. **Establishing more SEZs** : The government needs to allow a longer tax-free status for SEZs (Special Economic Zones) to unlock their full potential.
15. **Reviving capex cycle** : The government should revive the capex cycle (Capital Expenditure cycle) at the earliest to generate momentum in the industrial activities and thereby create employment.



16. Establishing a healthy bond market : A deep, liquid and strong corporate bond market should be promoted. A healthy bond market attracts huge foreign funds in the country.

2.4. Financial Markets

Financial markets are the important components of a financial system. These are the systems or arrangements that provide facilities for buying and selling of financial instruments. These markets act as an important link between the savers and the investors in any economy. Hence, the participants in these markets include the borrowers (i.e. the issuers of securities), the lenders (i.e. the buyers of these securities) and the financial intermediaries.

So, simply speaking, the markets which cater the credit requirements of different individuals, business firms and the other public and private sector organisations, can be considered as financial markets.

A financial market is, therefore, an institutional arrangement that facilitates trading of financial products under a particular policy framework.

2.4.1. Characteristics of financial markets

Some of the characteristics of financial markets are as follows :

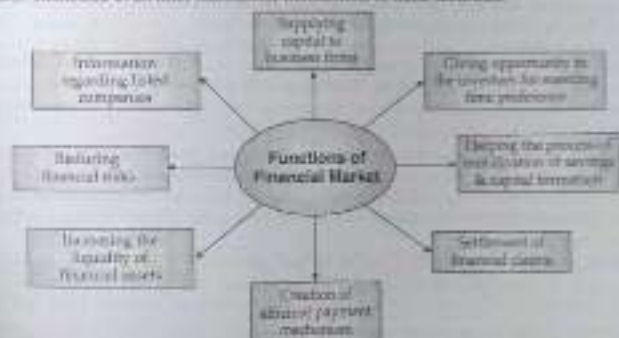
- Large Volume of financial transaction :** In any economy, huge volume of financial transactions takes place through the financial markets, and the flow of funds from one segment of the market to the other becomes faster.
- Different segments of the market :** A financial market has different segments. For instance, the share market, the debt market, the primary market, the secondary market, the money market, the capital market, etc. Hence, the savers get the opportunity of taking decisions regarding 'how to invest', 'when to invest', and 'where to invest'.
- Dominance of financial intermediaries :** A large number of financial intermediaries take investment decisions or financial risks in different segments of the market on behalf of their clients/depositors. So, the financial markets are largely dominated by these financial intermediaries.
- Existence of arbitrage process :** The investors (or the arbitrageurs) can simultaneously purchase some financial assets in one segment of the financial market, and sell the same in some other segment thereby gaining from the price differences between markets. This process is known as 'arbitrage'.
- Close linkage with international financial markets :** At the present era of economic globalisation, a close relationship is established between the domestic financial markets and global financial markets. So, any boom or recession in the global financial market gets reflected in the domestic financial market without much delay.
- Existence of negative externalities :** If economic behaviour (productive or consumption) of some economic agent affects badly any other economic agent who is not at all related to his economic activities, then it is called a negative externality of production or consumption. Thus, a 'short' in the stock market can affect the investment environment in the 'real' sector of an economy.
- Existence of speculative trading :** Speculative trading takes place in financial markets on the basis of price expectations. So, there may be abnormal fluctuations of some share prices and stock indices. Generally, the investors who are pessimistic and expect a fall in the average price of shares in near future, start selling more shares in the stock market. This would intensify the downward trend in stock prices. It is called a 'bear market' or a 'bearish trend' in the stock market. On the other hand, the optimistic investors expect an increase in stock prices in near future. So, they start purchasing more shares causing a further increase in share prices. It is called a 'bull market'.



2.4.2. Functions of financial markets

The financial markets play an important role in the development of any financial system. An analysis of the functions of these financial markets would reveal their importance.

- Supplying required capital to business firms :** Different types of small, medium and large business firms can raise their required capital through the financial markets. So, business activities can expand at a fast pace in such an economy.
- Opportunity of exercising time preference in investment decisions :** The investors generally prefer present income more than the future income because the future income is uncertain. Some investors prefer to have a return on investment within a short span of time while some others may be ready to wait for longer periods. So, in financial markets, these investors get the opportunity to invest in short-term, medium-term or long-term securities according to their time preference pattern.
- Settlement of financial claims :** Different types of financial securities transacted in the financial markets actually imply different financial claims. These financial claims can be settled quickly and easily through an efficient operation of the financial markets.
- Assisting the process of mobilising savings and capital formation :** When different types of financial intermediaries appear with different types of financial assets in the financial markets, then the savers would be more interested to save in the form of financial assets. As a result, more funds would be available for productive investments. So, the process of capital creation would become faster.
- Creation of an efficient payment mechanism :** As the process of transaction of financial assets in different segments of the financial markets becomes more efficient, the payment mechanism in an economy also becomes more efficient. For instance, when the commercial banks provide completely computerised banking services to their customers, the process of clearing and settlement of financial claims becomes faster. Similarly, the stock exchanges may utilise 'on-line' trading system for quick settlement of financial claims.
- Facilitating an increase in liquidity of financial assets :** With efficient operation of financial markets, the investors would get higher opportunities to sell their financial assets and get liquid cash. A financial market is considered to be more liquid if market prices of securities remain unaffected even after substantial transactions of these securities.





- (g) **Facilitating the process of reducing financial risks** : A developed financial market facilitates the investors to invest in different types of financial assets with varying risk components. So, it becomes possible for the investors to diversify the risks involved in a business investment. So, the overall risks in investment can be minimised.
- (h) **Providing information about the operations of different companies** : When different companies raise their required capital through the financial markets, they become legally bound to disclose various information regarding the types of investment projects undertaken, previous rates of return on other projects, etc. (through the publication of their prospectus). Hence, the investors become aware of the activities and financial performance of various business firms. It helps them to take prudent investment decisions.

2.4.3. Types of Financial Markets

The financial markets can be classified on the basis of the type of securities traded, the maturity period of financial assets, nature of control of the regulatory body, geographical location of the market, etc. We have already discussed a bit on this issue.

- **Money Market & Capital Market** : The financial market that facilitates transaction of short-term securities (with a maturity period of 1 year or less), is considered as the money market. The financial instruments which are considered as close substitutes of money (such as treasury bills, commercial papers, certificate of deposits, call money, etc.) are transacted in this market. According to Crowder, "the money market is a collective name given to the various firms and institutions that deal with various grades of 'near money'."

So, the money market provides a mechanism for meeting the short-term liquidity needs of both lenders and borrowers. The participants of this market include the Central Bank, different commercial banks, cooperative banks, discount houses, etc.

On the other hand, the capital market deals in long-term securities or long-term claims (with a maturity period of more than 1 year) such as shares, debentures, etc. The capital market may be defined as the mechanism which coordinates the demand and supply forces of long-term capital.

The main participants of the capital market are different insurance companies, mutual fund organisations, development banks, merchant banks, foreign and domestic multinational companies, etc.

It is important to note that there remains a close linkage between money market and capital market. This is because (i) several financial institutions participate in both money market and capital market. For instance, different commercial banks in India participate in both these markets at the same time (say, by purchasing shares from the stock market); (ii) the funds collected in the money market can be used to maintain liquidity of long-term securities and provide redemption values of the debentures; and there also remains an interlinkage between short-term interest rate in the money market and the long-term interest rate in the capital market.

- **Primary market and secondary market** : The capital market includes both primary and secondary markets. The primary market is the direct market deals with new issues of long-term securities. Any company can place its first-hand securities for public subscription (called as Initial Public Offering or IPO) through the primary market. Hence, the primary market is called as New Issue Market.

The primary market is also called as the 'direct market' because it makes an arrangement for the mobilisation of savings and direct supply of such mobilised fund to business enterprise (i.e., the ultimate borrowers). In this market, the securities are offered to the investors for the first time.

On the other hand, the secondary market is the indirect market deals in old or second-hand securities. So, this market deals in such securities which have already been issued and listed in

the exchange for their future transactions. This secondary market is also known as the 'indirect market' because it indirectly contributes to the supply of required capital for business enterprise by making them the scope of making 'old' securities more liquid.

● **Organised and Unorganised Market** : Any financial transaction that takes place within a structured, organised, organised and regulated framework, can be considered as the organised part of the financial market. The stock market, inter-bank call money market, wholesale debt market, etc. operate in a systematic manner within a regulatory framework, are the examples of organised segments of the financial market.

On the other hand, the financial transactions that take place without any structured, well-organised and regulated framework, can be considered as the unorganised segment of the financial market. For instance, the rural money lenders, indigenous bankers, etc. in India fall in this category. However, the gradual progress of the financial markets in an economy, the share of such unorganised market in the total financial transactions declines gradually.

Distinctions between Organised Financial Market and Unorganised Financial Market

The financial markets are divided into two parts, such as Organised financial market and unorganised financial market. Organised financial market is that financial market which is governed and regulated by some regulatory bodies through their predetermined rules and regulations. In this market, transactions take place systematically abiding by the rules and regulations of the regulatory bodies. On the other hand, unorganised financial market, operators or players are not governed by any regulations. In this market, transactions do not take place following any rules or regulations.

The main points of distinctions between these markets are discussed below.

Point of Distinctions	Organised Financial Market	Unorganised Financial Market
Structure	It is that financial market which is governed and controlled by rules and regulations of some regulatory bodies (banks, call money market, mutual fund houses, etc.) are the players in such market.	It is that financial market which is not governed and controlled by any regulatory bodies. Mahajan, indigenous bankers, private money lender etc. are the players of such markets.
Rules and regulations	Transactions in this market are highly regulated by the norms and regulations of the regulatory bodies.	Transactions in this market are not regulated by any norms and regulations.
Regulation	Participants/institutions of this market are registered under specific regulatory bodies.	Here, participants are not regulated under any regulatory body.
Activities	The main activities of this market are accepting deposits from the savers and entrepreneurs and provide credit to entrepreneurs and others.	This market provides credit to the individuals and others.
Kind of services	This market provides multifarious services to the entrepreneurs and the individuals.	Services rendered by this market is restricted to only providing credit to the borrowers.
Mode of transactions	Any transaction deal in this market is formal in nature.	Any transaction deal in this market is informal in nature.
Transparency	Here, absolute degree of transparency in every transaction is observed.	Here, lack of transparency is observed in every transaction.
Mortgaged	In this market, loans are provided by the institutions against adequate amount of security.	No such mortgage is generally seen when a loan is sanctioned in this market.

Point of Distinction	Organised Financial Market	Unorganised Financial Market
8. Volume of Transactions	High, voluminous transactions are found in this place.	There, comparatively fewer and small transactions are found here.
9. Management	Transactions or players in this market are managed by professionals and experts having superior level of knowledge about the securities market.	Players in this market are not managed by professionals or experts.
10. Public confidence	General public enjoys their confidence in this market.	Usually general public do not express confidence in this market.
11. Role in Economic Development	This market plays an important role in the economic development of a country.	This market does not contribute much to the economic development of a country.

2.4.4. Features of Indian Financial Markets

Developed and well limited financial market contributes immensely for attaining national economic development of a country. Features of Indian financial markets are discussed below:

- (1) Presence of organised and unorganised financial markets:** Indian financial market is divided into organised and unorganised sectors. After regulatory bodies in the money market are RBI, SEBI, IRDA, etc. The Commercial banks, co-operative banks, development banks, etc., belong to the organised financial market. Organisations which are not under the control of the RBI, SEBI or any other regulatory body, are the part of unorganised money market (such as, Nidhi, Mahabir, etc.).
- (2) Lack of co-ordination:** Organised sector of the financial market is well regulated by its regulatory bodies. But the unorganised sector is beyond the control of the regulatory bodies. So, lack of co-ordination is found among the activities of organised and unorganised sectors.
- (3) Limited participation:** Per capita income of the people of India is very low. So, the savings of the people is very poor. General people hardly participate in the activities of the financial market.
- (4) Existence of black money:** Organised sector of the financial market is under the strict control of the RBI, SEBI and other regulatory bodies whereas unorganised sector is beyond the control of the regulatory bodies. It leads to the generation of black money in the system.
- (5) Unbalanced growth of financial markets:** Financial system in India have not developed in the balanced way. Rural people are mostly deprived from the facilities of financial markets.
- (6) Lacking centralised financial markets:** Indian financial market is not so centralised as compared to such markets of other developed countries. Indian financial market has remained fragmented and all the regions of the country are not equally developed. A holistic development of the financial market is witnessed in our country.
- (7) Lack of competition:** Indian financial markets are not competitive enough. So, it leads to inefficient operation and, therefore, economic growth is not reached at the satisfactory level.
- (8) Limited financial instruments:** There is a dearth of innovative financial instruments in the Indian financial markets. Although some new financial instruments have been introduced recently, but all these instruments fail to gain much popularity among the general traders.
- (9) Lack of well-organised banking system:** Indian banking system is not yet developed in a balanced manner. Banking services are only concentrated in urban areas. Most of the rural people cannot avail the modern banking facilities adequately.

efficiency and growth. Indian financial market has witnessed many corruption and scam. These have diverted the attention of the general investors.

2.4.5. Components of Indian Financial Markets: a brief overview

Indian financial market has different segments as mentioned below:

(1) Money Market: The sub-markets of the money market are:

- (a) Call money market,
- (b) Treasury Bill market,
- (c) Commercial Bill market,
- (d) Commercial Paper market,
- (e) Certificate of Deposit market,
- (f) Repurchase agreement market or Repo market and Reverse repo market.

The participants of the Indian money market are the commercial banks, some financial institutions, the Reserve Bank of India, the domestic and foreign investors, primary dealers, etc.

(2) Capital Market: The participants in the Indian capital market are:

- (a) Investment banks,
- (b) Insurance companies,
- (c) Specialised financial institutions, etc.

The Securities market is the principal part of the Indian capital market and it is segregated into two parts:

- (a) Primary market (or New issue market), and
- (b) Secondary market (Bourse market).

(3) Foreign Exchange Market: The participants in this market are export and import houses, commercial banks, etc.

(4) Financial Derivatives Market: Different organisations and investors who want to derive value from various underlying assets of any financial instrument, participate in this market.

Now, we give description of these segments of the Indian financial market.

(1) Money Market: Money market is defined as a highly organised market where monetary institutions for short-term credit are effected through the process of accepting deposits and lending money. It deals with the transactions of raising and supplying money in a short period not exceeding one year through various instruments. Following are the sub-markets of the money market.

(a) Call Money Market: It is that market where day-to-day surplus funds, mostly of banks, are traded. It comprises a major part of the total turnover of the money market. It is the key segment of the Indian money market. Call money market provides very short-term funds repayable within 14 days. The major direct constituents of call money market are commercial banks, cooperative banks, primary dealers, discount houses etc. The financial institutions such as LIC, GIC, UTI, IDBI, ICICI, IFCI, NABARD, etc., are indirect participants of the money market.

(b) Treasury Bill Market (T-Bill): It is a short-term financial instrument issued by the RBI on behalf of the government to overcome short-term liquidity problem. It is issued for raising short-term funds required for bridging the gap of the government's fiscal deficits.



- (iii) **Commercial Bill Market** : It deals with the bills of exchange which is a short-term, negotiable and self liquidating money market instrument. Commercial banks, by discounting commercial bills, provide short-term funds to the business organisations. Commercial banks may also rediscount these bills from the RBI for raising funds.
- (iv) **Commercial Paper Market** : A Commercial Paper is a short-term promissory note. It was introduced in 1990 in the Indian money market. It is negotiable in nature. It is generally issued by the large-sized and highly rated companies to raise short-term funds for meeting the working capital needs.
- (v) **Certificate of Deposit Market** : Certificate of Deposits are short-term and interest-bearing instruments issued in bearer form by the commercial banks and development financial institutions. It is a negotiable instrument which can be traded in the exchange. It was introduced in the Indian money market in June 1989.
- (vi) **Repo Market and Reverse Repo Market** : Repurchase agreement or Repo refers to a transaction in which a participant acquires funds immediately by selling securities with an agreement to repurchase the same after a specified time at specified price. So, it is a temporary sale of debt involving transfer as a ready forward transaction, as it acquires funds by selling the security on a spot basis and repurchasing the same on a forward basis. Note, Repo is used by the RBI as a short-term instrument for liquidity management. If there is excess demand for liquidity then the RBI purchases government securities from the commercial banks for a very short period (say, 7 days) and, in turn, extends credit to the commercial banks. These take place an agreement between the commercial banks and the RBI to the effect that the commercial banks will repurchase these securities at a given price after say 7 days from the RBI. Here, the interest rate charged by the RBI on such short-term credit is called as the 'repo' rate. On the other hand, when the RBI wants to pump out excess liquidity from the market, then it sells government securities to the commercial banks with such repurchase agreement. Here, the interest rate offered by the RBI on these securities is called as 'reverse repo' rate. The RBI generally raises the repo rate to check inflationary pressure.

Thus, reverse repo is exactly the opposite to repo in which a party buys a security from another party with an agreement to sell it back on a later date at a specified price. This transaction is open for the party and interest repo for another party. Reverse repo earns some returns on idle cash held by the party.

• Participants in the Indian Money Market :

The commercial banks, co-operative banks, regional rural banks, the Discount and Finance House of India (DFHI), the primary and satellite dealers, money market mutual funds (MMMFs), Securities Trading Corporation of India (STCI), clearing Corporation of India Ltd. (CCIL) and the Reserve Bank of India (as a regulator) are the principal participants of the Indian money market.

The DFHI was established in 1988 to facilitate second-hand transactions in different money market instruments. The Primary Dealers (PDs) are the recognised financial institutions which take part in the auction of government securities. The approved financial institutions with lower net worth can function as satellite dealers in the absence of PDs. The MMMFs facilitate the small investors to invest in money market instruments (e.g., the UTI Money Market Fund was established in 1990). The STCI was established in May 1994 to develop an active secondary market in government securities. On the other hand, the CCIL was established in 2004 to act as a clearing house for the settlement of market trades in government securities and inter-bank foreign transactions.

(b) **Indian Capital Market** : Indian capital market is segmented into two broad parts, viz., the primary market or the new issues market, and the secondary market or the stock exchanges. The



primary market facilitates both the unlisted and listed companies to raise required capital by issuing new shares.

On the other hand, the secondary market facilitates the investor to purchase and sell second-hand securities through stock exchanges. At present, there are four national level stock exchanges in India viz., Bombay Stock Exchange (BSE) Ltd., National Stock Exchange (NSE) of India Ltd., Over the Counter Exchange of India (OTCEI) Ltd., and Inter-connected Stock Exchange of India (ISSE). On the other hand, about 18 stock exchanges are functioning at the regional level (e.g., Andhra Pradesh Stock Exchange, Bengalore Stock Exchange, Kolkata Stock Exchange, etc.).

The OTCEI has no physical existence. The investors have access to this stock exchange through computer. The RBI was prompted by 15 regional stock exchanges of India to provide trading facility to all the participating stock exchanges.

Capital market is a highly organised market for providing long-term finance to industries, trade and commerce. It is the market wherefrom long-term capital can be raised either by sale of securities or capital can be borrowed from special financial institutions and development corporations.

The participants of the capital market are : (i) Investment trust and societies (such as UTI, FF funds, mutual funds etc.), (ii) Insurance companies (LIC, GIC etc.), (iii) Financial institutions (ICICI, SFC, IOCI, IDBI), (iv) Stock exchanges, (v) Depositories, (vi) Clearing corporations, (vii) Domestic and foreign investors, (viii) Stock brokers & sub-brokers, (ix) Regulatory body etc.

(c) **Foreign Exchange Market** : It is a highly regulated market where the currencies of the various nations are traded. In this market domestic currency or national monetary units or claims are exchanged for foreign currencies.

(d) **Financial Derivative Markets** : Derivatives are written contracts between two parties known as counterparties and the value of derivatives is derived from its underlying assets. Underlying asset can be agricultural and other commodities, currencies, equity shares, gold, silver, etc. Most popular types of derivatives are :

- Forward contracts,
- Future contracts,
- Option techniques—call option and put option,
- Swap techniques, etc.

• Financial Market Regulators

The institutions which regulate the entire financial system are known as financial market regulators. These are the important components of financial system. Indian financial market regulators are :

- Ministry of finance ;
- Reserve Bank of India (RBI) ;
- Securities and Exchange Board of India (SEBI) ;
- National Company Law Tribunal (NCLT) ;
- Insurance Regulatory Development Authority of India (IRDA) ;

• Objectives of financial market regulators :

Some objectives of the financial market regulators are :

- Bringing absolute transparency in the financial market transactions and the financial operations ;
- To safeguard the interest of the investors and to bring transparency in the dealing of securities ;
- To build confidence in the minds of the general investors on the securities market ;
- Bringing about economic growth in the country by creating a congenial economic environment ;

- (5) To prevent abuse perpetrated by unscrupulous persons in the financial markets, being the quasi-judiciary body, the SEBI takes stringent preventive measures against the individual.
- (6) To co-ordinate the activities of different components of the financial system so that they function harmoniously.
- (7) To frame and introduce financial policies to regulate the participants of finance market.
- (8) To create a congenial atmosphere in the finance market.
- (9) To create a healthy securities market in India.
- (10) To make the Indian financial system a most favoured investment destination.

Thus, even in a liberal economic environment, a strong regulatory framework is needed to check any tendency of monopoly or oligopoly activities in the financial market.

2.5. Money Market

The Money Market refers to the market for short-term securities (one year or less in case of treasury maturity) such as treasury bills, certificates of deposits, commercial papers, etc. The Money Market is a market where money and highly liquid marketable securities are bought and sold. Thus, the financial market that facilitates the transaction of short-term securities with a maturity period of one year or less, is called as the Money Market. Money Market instruments are short-term in nature. The money market constitutes a very important segment of a financial system. The Reserve Bank of India is the apex regulatory body of the Indian money market.

According to Reserve Bank of India, "Money Market is the centre for dealings, mostly of short-term character, in monetary assets; it means the short-term requirements of the business and providing liquidity or cash to lenders."

According to M. Y. Khan, "The money market is a market for overnight to short-term funds and for short-term money and financial assets that are close substitutes for money. 'Short-term' in the Indian context generally means a period upto one year; 'close substitutes for money' denotes any financial assets which can be quickly converted into money with the minimum transaction cost and without a loss in value."

The Reserve Bank of India (RBI) plays a pivotal role in the Indian Money Market and it is the apex body of the Indian money market. The RBI is the prime mover of the Indian money market and commercial banks are its major players.

2.5.1. Objectives of Money Market

Money market constitutes an important segment of a financial system. A healthy money market strengthens the overall financial system. It benefits a large number of players. It assures and provides a steady source of funds to banks in addition to deposits, allowing alternative financing structures and competition. It fosters the development of new bank intermediaries thereby enhancing the competition for funds. Savers get a wide scope of saving instruments to save their money. An efficient money market helps to develop a healthy capital market in the financial system. The main objectives of money market are discussed below.

- (1) **Building up a vibrant financial system:** A sound money market contributes greatly towards the development of buoyant financial market and financial system, which helps to attain the desired economic growth of the country.
- (2) **Providing short-term funds:** Money market provides short-term funds to the entrepreneurs, individuals and to the government. So, it meets the short-term liquidity of funds efficiently.
- (3) **Developing a healthy capital market:** A robust money market contributes greatly towards creation of a strong capital market. A liquid and vibrant money market is necessary for the development of a capital market, foreign exchange market and market in derivative instruments.

Helping to stabilise financial institutions: A sound money market creates a congenial environment that helps to stabilise large number of financial institutions in the country. Sufficient number of financial institutions means adequate amount of money of different kinds to the business firms and others for a large variety in the business operations of the country. As a result, the economy grows and the general people enjoy the benefits.

Facilitating transactions: An efficient money market allows the monetary transactions of business firms and other financial institutions conveniently and quickly. It helps to settle the transactions with large number in terms of savings, revenues, etc. In this way, a healthy money market activities in the country and also develops international trade with good results.

Ensuring liquidity in the system: A healthy money market provides sufficient amount of liquidity in the system and ensures smooth movement of cash flow in the system. It promotes the business operations.

Credit creation: Commercial banks in the money market accept deposits and create credit in the form of business institutions. In this way, they create credit in the system. It helps to maintain a cash flow in the system.

Ensuring easy cash flow: Participants of money market always maintain close relationship with them. Money market provides short-term credit and ensures efficient utilisation of their surplus cash.

Keeping equilibrium of short-term funds: It provides an equilibrating mechanism for business surplus and deficits of funds and thereby maintains stability in the financial system.

Creation of financial assets: It creates several financial assets such as treasury bills, commercial papers, certificates of deposits, etc. These financial instruments are used by corporate organisations extensively in financing their working capital needs.

2.5.2. Money Market: Its Functions

Money market plays a pivotal role in short-term financing to trade, industry and commerce. Money provides their required amount of working capital from the money market. The main functions of money market are discussed below:

- (1) **Providing short-term credit:** The participants of money market, specially the commercial banks, provide short-term funds to industries. The major part of working capital requirement of industries is supplied from the money market.
- (2) **Creation of credit:** Commercial banks accept deposits from savers and by providing short-term credit to industries, entrepreneurs and other parties, they create credit in the financial system.
- (3) **Facilitating economic growth:** Money market provides assistance in providing short-term funds to the industries. It helps them to carry on their production of goods and services efficiently. It encourages the entrepreneurs to start new projects and enhance capacities ensuring them to provide additional working capital loans in many forms and conditions. As a result, with the development of industries, economic growth can be attained.
- (4) **Providing inspiration for savings:** Money market provides several saving opportunities to the people of the country. Developed money market always generates and develops several financial instruments which will yield handsome returns for the savers. As a result, savers are encouraged to save.



- (8) **Maintaining flow of funds** : Industries require continuous and uninterrupted supply of short-term finance to carry on their operations smoothly. A developed money market helps the industries to supply short-term finance as and when required. It ensures smooth flow of funds in the country.
- (9) **Avoiding wide fluctuations of interest rate** : A well developed money market helps to reduce wide seasonal fluctuations in the interest rate. In fact, the money market provides a balancing mechanism to even out the demand for and supply of short-term funds.
- (10) **Aid to capital market** : Relation between money market and capital market is very close. Higher savings lead to more investments. A liquid and vibrant money market helps to develop a strong capital market. The short-term interest rates act as the benchmark for long-term interest rates.
- (11) **Custodian function** : Commercial banks act as custodian of valuables like gold, silver, precious metals and important financial instruments.
- (12) **Augmentation of trade prosperity** : Bill market is an important part of the money market. Commercial bills are discounted at commercial banks and thereby working capital is provided to industries. It smoothes the business activities.
- (13) **Underwriting functions** : Some financial institutions perform the function of underwriting of debentures issued by the corporate organisations.
- (14) **Bringing business prosperity** : Money market ensures adequate supply of short-term funds to the industries, trade and commerce required for working capital. It helps in smooth running of business operations and thereby it brings prosperity in business.
- (15) **Executing monetary policy** : The central bank of the country frames monetary policy by monitoring the money supply and for controlling inflation in the country. Efficient money market helps to execute that monetary policy in the financial system and thereby brings monetary stability in the country. Thus, the money market provides a focal point for the intervention of the Central Bank, viz., the RBI, for influencing liquidity and interest rate in the economy. So, it plays a central role in the transmission of monetary policy of India.
- (16) **Smoothening transactions of securities market** : Efficient money market provides adequate liquidity in the system. Traders get financial assistance from the money market for trading in the secondary market. It also provides sufficient amount of finance to the investors subscribing in the new issues.
- (17) **Removing imbalance of demand for and supply of money** : Mismatch of demand for money and supply of money creates huge problem in the economy. When money supply reduces, the business firms face paucity of funds. Thus, business operations get hampered. Again excess money supply induces price inflation. So, the money market, by selling the monetary policy of the central bank, maintains monetary stability in the economy.
- (18) **Expanding business activities** : Money market boosts up the business activities in the country. It provides sufficient amount of short-term funds to the entrepreneurs as and when required, and helps to keep the wheels of the business moving.

2.6.2. Components of Indian Money Market

Organised Money Market has different sub-markets. It comprises of various institutions. Following are important money market instruments and the related sub-markets.

- (1) Treasury Bill Market (T-Bill).
- (2) Central Government Securities (G-Secured securities).



- (3) Call Money Market (Call money).
- (4) Commercial Paper Market (Commercial Paper).
- (5) Certificate of Deposit Market (Certificate of Deposit).
- (6) Commercial Bill Market (Commercial bill).
- (7) Repurchase Agreement Market (Repo market) and Reverse Repo Market.
- (8) Bank Participation.
- (9) Term Money or Inter Bank Term Deposit.
- (10) Interest Rate Swaps.
- (11) Money Market Mutual Funds, etc.

The players or the participants of the money market include the commercial banks, cooperative banks, regional rural banks, land mortgage banks, development finance institutions, primary dealers, leasing corporations, discount houses, etc. The Central Bank of a country (viz., the RBI) is the regulator of the money market.

2.6.3. Features of Indian Money Market

A well developed money market is a must for economic development of a country. India's money market plays a pivotal role towards the economic development of the country. Salient characteristics of Indian money market, particularly during the pre-independence periods are discussed below.

- (1) **Organised and unorganised structure** : Indian money market may be divided into organised money market and unorganised money market. The participants of the organised money market are commercial banks, co-operative banks, rural banks, etc. The organised sector is under strict control of the RBI. The RBI is the apex body in the Indian money market. Unorganised money market consists of indigenous bankers, domestic money-lenders, etc. They are not under the control of the RBI. Therefore, Indian money market is not fully controlled. It is a partly controlled market.
- (2) **Low per capita savings** : Lower per capita real income and inequality in the distribution of income results in low per capita savings in a developing economy like India. Rate of savings in India is very low. Rural banks fail to raise much deposits from the rural people. So, per capita deposit rate is very poor in our country. Low savings rate deters the Indian financial system.
- (3) **Lack of sufficient banking facilities** : Indian banking facilities are not adequate. More than 40% of adult people in India do not have any bank account. So, financial inclusion is required for this purpose.
- (4) **Uneven development** : Adequate banking facilities are not available in rural areas. Major portion of bank branches in India is located in urban areas. Rural India bears the brunt of non-availability of sufficient banking facilities.
- (5) **Uneven interest rate and financial dualism** : Participants of unorganised money market charge high rate of interest to the borrowers. They are not regulated and controlled by any regulatory body. Thus, financial dualism exists in the Indian money market. It implies co-existence of higher interest rates charged by the non-institutional sources of credit (say, by the money-lenders in the rural credit market) and a relatively low interest rate charged by the institutional sources of credit (say, by the commercial banks).
- (6) **Underdeveloped bill market** : Indian money market suffers from unorganised bill market. In the industries cannot take the advantage of bill market.
- (7) **Foreign banks** : Indian money market is significantly influenced by foreign banks. In foreign mode, influence of foreign banks still exists.



- (9) **Lacking co-ordination** : In the Indian money market, these sectors organised as well as unorganised financial institutions. Unorganised sector cannot be controlled by the monetary authority. They do not have any governing principle to run the institutions. And the organised sector is strictly regulated by the monetary authority of the country. So, there exists a lack of co-ordination among these two sectors.
- (10) **Perilously high inflation** : Indian economy has been bearing the burden of persistently high inflation in the country. A substantially high rate of inflation defers the economic growth in the country. As a result, the main road block to the economic growth of the country is the persistently high rate of inflation. This unbridled high rate of inflation has to be controlled strictly by the RBI and the Government of India.
- (11) **Existence of unauthorised indigenous banking institutions** : Indian banking system has developed mainly in the urban areas. Rural India does not have sufficient banking services. More than 30% of adult rural people do not have any bank account. As a result, some unauthorised saving schemes have been expanding particularly in the rural areas and poor people are being deceived by some unscrupulous operators of these institutions.
- (12) **Schemes** : Indian money market has suffered a lot due to scams perpetrated by some unscrupulous institutions and persons.
- (13) **Shortage of money market assets** : Indian money market suffers from paucity of money market instruments in the system. It defers the smooth operations of the system. It reduces its depth of the Indian money market.

2.5.9. Structure of Indian Money Market

Indian money market is composed of two distinct sectors — organised sector and unorganised sector. The participants of organised market are RBI, nationalised banks, cooperative banks, Regional Rural Banks etc. and the unorganised sector is comprised of money-lenders, collective investment schemes, indigenous bankers, etc. The structure of Indian Money Market is shown in Chart-16 in the next page.

2.5.10. Participants of Indian Money Market

A brief description on the different participants of Indian money market is given below :

• Organised Money Market :

- (1) **Reserve Bank of India (RBI)** : RBI is the central bank of India and it is the apex body in Indian money market. It was established in 1935, under the RBI Act, 1934.
- (2) **State Bank of India (SBI)** : The Imperial bank was nationalised in 1955, and it emerged as the State Bank of India to act as a commercial bank. It is the largest commercial bank of the country.
- (3) **Commercial Banks** : Commercial banks collect deposits from public and provide mostly short-term loans to the general people and to the industries. They create credit in the system through the creation of demand deposits while giving loans to the borrowers. These are mainly two types — (a) Scheduled commercial banks, and (b) Non-scheduled commercial banks.
- (4) **Exchange Bank** : Exchange banks help to promote foreign trade. Services rendered by these banks are — (a) purchasing foreign exchange, (b) discounting foreign bills, (c) providing credit to entrepreneurs for procuring business in foreign countries, etc.



Structure of the Indian Money Market

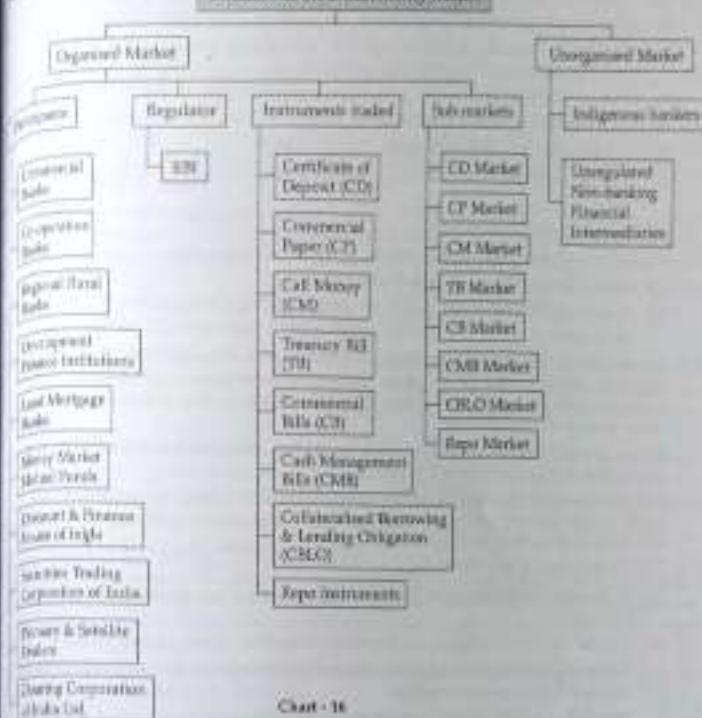


Chart - 16

- (5) **Agricultural Banks** : These are the rural banks established for rolling out credit to the farmers at low rates of interest and on easy terms and conditions.
- (6) **Local Mortgage Banks** : These banks are established in order to enhance the productivity of agricultural lands. They provide long-term loans to the farmers on easy terms and conditions and at low rates of interest.
- (7) **Cooperative Banks** : These banks are established to provide short-term loans to rural farmers and small entrepreneurs at low rates of interest.
- (8) **Money Market Mutual Funds (MMMFs)** : The MMMFs were introduced in India in 1995 to provide an additional short-term avenue for investment and bring money market investment within the reach of individuals. This mutual fund invests exclusively in money market instruments. It mobilises savings from small investors and the collected funds are invested in short-term debt instruments or money market instruments.
For example, UTI Money Market Fund (1997), ICICI Prudential Money Market Fund (2002), In Money Market fund Regular (2004), etc.

• Features of Money Market Mutual Funds :

Following are the salient features of money market mutual funds:

- (a) The MMMFs are established in India by the scheduled commercial banks and public financial institutions. From 1995, the private sector mutual funds are being also permitted to set up this organisation with prior approval of the SEBI.
 - (b) Minimum lock-in period in this fund is 15 days.
 - (c) Any individual can subscribe to the units of MMMF.
 - (d) They are regulated by the RBI. Recently they have been brought under the purview of the SEBI.
 - (e) The stamp duty is exempted.
 - (f) Net asset value (NAV) of each scheme is disclosed once a week.
 - (g) Money can be withdrawn as and when required.
 - (h) These fund houses invest mostly in government securities and other money market instruments.
- (9) **Development Finance Institutions :** The development finance institutions such as IDBI, IFCI, SIDBI etc., provide long term credit to different types of industrial units. However, as per the instructions of the RBI, these financial institutions have begun to participate in the 'Term Money Market' of India.

A term money market is one where funds are traded upto a period of 5-6 months. However, this market is not yet developed in India.

- (10) **The Discount & Finance House of India (DFHI) :** It was set up jointly by the RBI, some public sector banks and All-India Financial Institutions. It was incorporated in March, 1988 and started functioning since April, 1988.

The Objectives of the DFHI are :

- (a) To promote the secondary market of the money market instruments (call money, T-bills, CDs etc.).
 - (b) To even out the supply-demand mismatch in liquidity in the banking system.
- It regularly quotes both the buying price and the selling price of money market instruments, and thus helps in market making.

Since 2004, the DFHI City Ltd. was merged with DFHI, and it is now called as SBI-DFHI Ltd.

- (11) **Primary Dealers (PDs) :** The PDs are those recognised financial institutions (approved by the RBI) which regularly take part in the auctions of G-secs in the primary and secondary markets. Thus, the infrastructure of the G-sec market is strengthened. As per the guidelines of RBI in March 1995, the subsidiaries of scheduled commercial banks, All-India Financial Institutions etc., with a net worth of at least ₹ 50 crore can apply for becoming a PD (e.g., the DFHI was accredited as PD since February 1995). The wholesale trade in G-secs is routed through the Subsidiary General Ledger (SGL) account maintained with the RBI. The G-secs or the government securities are held in demat form in this account.

- (12) **Satellite Dealers :** They are in the second tier in the trading and distribution of the G-secs. The scheduled commercial banks and the All-India Financial Institutions which are not PDs can become Satellite Dealers. They must have a net worth of at least ₹ 5 crore.

- (13) **Securities Trading Corporation of India (STCI) :** It was set up jointly by the public sector banks and All-India Financial Institutions in May 1994.

The objective was to develop an active secondary market in G-secs and bonds issued by the public sector undertakings. It is involved in : Auctions of Government Securities (G-secs) and Treasury Bills (TBs) ; market making and trading in G-secs & TBs ; participating in the Repo market of G-secs and TBs ; participating in the Call Money market etc. Since 1996, STCI has been accredited as a PD.

Clearing Corporation of India Ltd. (CCIL) : This was set up in 2002 by some commercial banks, PDs and Financial Institutions (Principal promoters were SBI, IDBI, Bank of Baroda, COFC, etc.). It acted as a clearing house for the settlement of inter-bank foreign transactions and market trade in G-secs.

It is important to note that a government security (G-sec) is a tradable instrument issued by the Central government or the state government. It acknowledges the debt obligation of the government. Such securities are short-term (usually called as Treasury Bills or T-Bills with original maturities of less than 1 year) or long-term (usually called as government bond or bond securities with original maturity period of 1 year or more) in nature.

Participants of the Unorganised Money Market :

Indigenous Bankers : A person or private institution, who receives private funds and lends them by mortgaging ornaments and other properties is known as indigenous bankers. The Chettis, Marwaris, South Indian Chettiers, Mahajans, Marwar traders and Seths act as indigenous bankers.

Collective Investment Scheme : These are saving institutions which collect small savings from the public and invest in various projects and provide high rate of interest to its members.

Registered Non-Banking Financial Institutions : These institutions raise funds from public by issuing certificates and provide short-term and medium term loans to industries.

Features of Money Market Instruments

Several kinds of instruments are available in a developed and organised money market. Call loan, Treasury bill, commercial bill, certificate of deposit, repo and reverse repo etc. are the important money market instruments. These instruments possess some unique features. These are discussed below :

- Short-term nature :** Money market instruments are very short-term in nature. Their maturity period ranges from one day to one year.
- Highly liquid :** These instruments are highly liquid in nature. These instruments can be easily converted into cash.
- Secured :** Most of the money market instruments are highly secured. The RBI controls the money market instruments and the central government issues treasury bills, and the commercial banks issue certificate of deposits. These are highly secured by the competent authority.
- Variegated rate of interest :** These instruments carry different interest rates. This interest is largely on market conditions.
- Simultaneous transactions :** These instruments are transacted in huge volumes. So, liquidity of the market is maintained.
- Collateral security :** Money market instruments may be used as collateral security for raising loans from banks and other financial institutions.
- Used for meeting working capital requirements :** Corporate organisations, by using money market instruments, procure short-term funds. They meet their working capital requirements by using these instruments.



- (8) **Inflow of funds to the government exchequer** : The government raises funds by issuing some money market instruments. The government may issue treasury bills for raising funds from the money market. So, these instruments may be used by the government to bridge the budgetary gap.
- (9) **Short-term investments** : Individuals and business houses possessing some liquid funds may deploy their funds in these instruments for very short span of time.
- (10) **Generate returns on idle funds** : Surplus cash may be deployed in these instruments for a very short period and earn interest on it. So, idle funds can generate some returns for the individuals and business houses.

2.5.8. Brief Description of Money Market Instruments in India

Let us now look into the structure and features of some key money market instrument as prevalent in India.

■ Treasury Bills (T-Bills) :

Treasury bills or T-bills, which are money market instruments, are short-term debt instruments issued by the Government of India and are presently issued in three tenors, namely 91-days, 182-days, and 364-days. Treasury bills are zero coupon securities and pay no interest. They are issued at a discount and redeemed at the face value at maturity. For example, a 91-days Treasury bill of ₹ 100 (face value) may be issued at say ₹ 98.20, that is, at a discount of say, ₹ 1.80 and would be redeemed at the face value of ₹ 100. The return to the investors is the difference between the maturity value or the face value (that is, ₹ 100) and the issue price.

These are highly liquid instruments and their demand largely arises from banks, financial institutions and corporate organisations.

■ Features of T-Bills :

Following are the important features of Treasury bills :

- (1) They are negotiable financial securities issued by the government.
- (2) They are highly liquid securities traded in money market.
- (3) There is no risk of default.
- (4) Return or yield is assured.

■ Commercial Paper :

A commercial paper is an unsecured short term promissory note. It is negotiable and transferable by endorsement. It is issued by big corporate houses at a discount to face value to meet its working capital requirements. It is also known as finance paper, industrial paper or corporate paper. This paper is subscribed by individuals, banks and corporate houses. Presently commercial papers can be held in a dematerialised form.

In 1987, the Working Group on Money Market suggested the introduction of Commercial Paper (CP) in India. Accordingly, the RBI introduced the CP in January 1990. Initially, only large and highly rated corporate houses could issue CP in India. However, later on the CPs could be issued by the All-India Financial Institutions (say, FCI, SIDBI, etc.) and the Primary Dealers. The CPs are issued to individuals, commercial banks, joint stock companies and other registered corporate bodies in India. The CPs can also be issued to NRIs only on a non-transferable and non-repatriable basis. The NIs are also eligible to invest in CPs as per the norms fixed by the RBI.

■ Features of Commercial Paper :

Following are the features of commercial papers :

- (1) High credit rated companies raise short-term capital by issuing commercial papers at a very low cost.



Some of the issuing companies are not to be mortgaged.

It is very flexible in nature.

The process of issuing this paper is less cumbersome and simple.

■ Certificates of Deposit :

Certificate of Deposit is issued by commercial banks and development banks for raising short-term funds. It is an unsecured and negotiable short term instrument issued in bearer form. Scheduled commercial banks and co-operative banks can issue certificate of deposit for a period of not less than three months and upto a period of not more than one year.

The Certificates of Deposit (CDs) were introduced in India in June 1989. Only scheduled commercial banks including Regional Rural Banks (RRBs) were allowed to issue CDs. However, in 1990, the non-scheduled finance institutions were also allowed by the RBI to issue CDs (e.g., its financial institutions, viz. IDBI, IFCI, ICICI, SIDBI, DRI & EXIM Bank were permitted to issue CDs).

■ Features of Certificates of Deposit :

Following are the salient features of the certificate of deposit :

- (1) An individual and an institution can subscribe this instrument.
- (2) It is a money market instrument in the form of promissory note at a discount.
- (3) It is a negotiable instrument.
- (4) There remains no lock-in period in this instrument.
- (5) Deposits in these instruments can be made in ₹ 1 lakh and its multiples.

CRR, Call Money Market

Call money market is a financial market where day-to-day surplus funds of banks and other financial institutions are traded in. This market provides loans for a very short-term period whose maturity period lies between one day and a fortnight and the loans are repayable on demand. This is a highly liquid market. It is an important segment of the Indian money market where volumes of transactions are taken place.

Call money is required mostly by banks. Commercial banks borrow money from other banks to maintain the minimum Cash Reserve Ratio (CRR) with the RBI. The inter-bank borrowing has led to the development of the call money market.

When a bank faces liquidity crunch and does not have much liquid cash to maintain the minimum reserve with the RBI, it procures short-term loans from the call money market to fulfil the requirement. Other banks whose liquid cash position gets enhanced and remain idle for a while, provide call loans in this market and earn some interest. This market helps the bank to avoid penalty imposed by the RBI for non-maintenance of minimum cash reserve with it. Again, other banks which possess excess cash reserve that remain idle for some time, can earn interest by lending call loans in this market.

■ Participants of Call Money Market :

Following institutions are the participants or players in the Indian call money market :

- (1) RBI and other scheduled commercial banks,
- (2) Non-scheduled commercial banks,
- (3) Foreign banks,
- (4) Co-operative banks,
- (5) Life Insurance Corporation of India (LIC),
- (6) General Insurance Corporation of India (GIC),



- (7) Unit Trust of India (UTI).
- (8) Discount and Finance House of India (DFHI).
- (9) Securities Trading Corporation of India (STCI).
- (10) Industrial Development Bank of India (IDBI).
- (11) Industrial Credit and Investment Corporation of India (ICICI).
- (12) Industrial Finance Corporation of India (IFCI).
- (13) National Bank for Agricultural and Rural Development (NABARD).
- (14) Primary Dealers.

Prior permission is required from the Reserve Bank of India to participate in the call money market.

• Nature of Indian Call Money Market :

The nature of Indian call money market is discussed below :

- (1) **Arranging short-term loans :** Call money market arranges for very short-term loans to banks who need it for maintaining the stipulated rate of cash reserve with the RBI. The tenure of the loans lies between one day to fourteen days.
- (2) **Short repayment tenure :** Banks procure call loans from this market for a maximum period of fourteen days. Within this period, call loans are settled along with stipulated rate of interest.
- (3) **Safe and secured :** As this market is strictly regulated by stringent rules and regulations framed by the RBI, call loans become safe and secured.
- (4) **Participation of institutions :** Mostly commercial banks actively participate in this market. Apart from the commercial banks, other participating institutions are cooperative banks (DCU, UTI, GIC, IDBI, ICICI, IFCI, NABARD), Primary Dealers etc.
- (5) **Call rate :** Interest paid on call loans is known as call rate. This rate fluctuates every now and then. It is determined by the market and depends on demand for and supply of call loans in the market.
- (6) **Approval :** In order to participate in the call money market, necessary approval is needed from the money market apex regulatory body i.e., the Reserve Bank of India. Without obtaining prior permission, no institution can enter into this market.
- (7) **Location :** Indian call money market is situated mostly in big cities like Mumbai, Kolkata etc. Its existence is not witnessed in small cities and towns. However, there is no physical location of this market.
- (8) **Not well developed :** Indian call money market is still underdeveloped as compared to those of other developed countries, such as USA, China, Japan, etc. Volume traded in this market remains sluggish.
- (9) **Demand fluctuations :** In the Indian market, demands for call loans fluctuate very frequently. Sometimes a dearth of liquid funds is witnessed in this market due to excessive demand for call loans.
- (10) **Poor participation :** All commercial banks in India do not participate in this market actively. As a result, this market remains less and almost development gets inhibited.

• Call rates :

The interest rate paid on call loans is known as the 'call rate'. It is a highly volatile rate that varies from day to day and hour to hour. Presently, the call rate has been freely determined by the market forces. There are two call rates prevalent in Indian call money market. These are —



the one-day call rate, and

the lending rate of Discount and Finance House of India (DFHI).

The average daily turnover in the call money market of India was about ₹ 14,170 crore in 2004-05. The average daily turnover in the call money market of India was about ₹ 23,070 crore in 2013-14. Further, the average call rate in the Mumbai money market varied between 7.14% to 17.72% during 1999-2002. However, this volatility has reduced in recent years, e.g., the rate varied between 8.5% and 8% during 2013-14. (In our previous chapters, we have already indicated variations in call rates over years.)

• Role of Call Money Market :

Call money market is the key segment in the Indian money market. It accounts for a major part of the total turnover of the money market. Its importance is discussed below :

- (1) **Providing very short-term loans :** It is an important component of money market which deals with borrowing and lending of funds within very short period of time. It fulfils the very short-term requirements of funds of banks and other institutions.
- (2) **Channelisation of funds :** Call money market enables the participants to lend their surplus funds and earn interest on such funds. Surplus funds of an institution get channelised properly to the institutions that require funds for a very short period of time. So, surplus funds of an institution does not remain idle, rather it remains it productive use.
- (3) **Supply fund for a very short period :** It helps to enhance the supply of short-term funds in the money market. It maintains adequate liquidity in the system.
- (4) **Feasible investments :** It helps in augmenting the stock exchange trading. Surplus funds of an institution can be deployed in government securities and other instruments for a very short period of time and earn interest thereon.
- (5) **Helps to banks to maintain reserves :** Call money is transacted mostly among banks. It helps the banks to maintain their minimum cash reserve ratio.

• Drawings of Indian Call Money Market :

- (1) **Coming to the context of the limited spread of Indian money market as compared with developed nations. The reasons behind the such lack of expansion being :**
- (2) **Underdeveloped bill market :** Indian bill market is not well developed. Banks are not willing to provide credit to the makers of bills. So, demand for call loans in the bill market remains sluggish.
- (3) **Not easily available :** Call loans are available only when banks and other participants have surplus cash. So, loans are not readily available as and when needed.
- (4) **Lack of eagerness :** Indian banks do not provide much credit to share brokers or their representatives. It dampens the depth of call money market as the demand for short period of funds are not met by the banks.
- (5) **Poor participation :** All the commercial banks in India do not participate in this market. Indian call money market has not become well developed due to lack of all round participation of banks in this market.
- (6) **Adequate cash reserve :** Banks maintain adequate cash reserves throughout the year. It leads to smaller requirement of funds to meet their varying reserve ratios to the RBI.

11.2 Treasury Bill (TB) Market

We have already discussed the meaning and features of Treasury Bills in subsection 1.5.3. In the Indian Bill Market, a sub-market of the Indian money market, TBs are transacted. They are sold and bought. —



by the government and purchased by several financial institutions since the T-bills are considered as risk-free investment (as the return is assured).

• Types of T-Bills

The T-Bills can be classified into three categories:

- (1) **On-tap Bills**: These T-Bills could be bought at any time from the RBI at a given interest rate of 4.66%. However, these variants of T-Bills were discontinued in India since April 1987.
- (2) **Ad hoc T-Bills**: These ad hoc T-Bills were introduced in India in 1953. In fact, the government of India had to maintain a cash balance with the RBI, of not less than ₹ 30 crore on Fridays and ₹ 4 crore on other days, and whenever this balance fell below that minimum, the government account had to be replenished through the creation of ad hoc T-Bills in favour of the RBI. Ad hoc 91-days T-Bills were created to replenish the cash balance of the government with the RBI. This process resulted in an automatic monetization of deficit in the government budget.

A large portion of outstanding ad hoc T-Bills were converted into long-term dated and undated securities of the Government of India during 1970s and 1980s. This conversion is referred to as 'bonding', and this process put a constraint upon the proper implementation of the monetary policy of the RBI (since, it led to an automatic rise in the supply of money, with growing budget deficit). So, the issue of ad hoc T-Bills were discontinued since April 1997. *Asymmetric Ways and Means Advance (WMA)* was introduced to replace the ad hoc T-Bills for accommodating temporary mismatch in the revenue and expenditure of the government budget.

- (3) **Auctioned T-Bills**: The RBI has introduced the auctioned T-Bills since 1991. The RBI conducts such auctions usually every Wednesday to issue T-Bills. The 51-days T-Bills are auctioned every Wednesday. On the other hand, the 182-days T-Bills and 364-days T-Bills are auctioned on alternate Wednesdays.

Before the introduction of auctioned T-Bills, the major part of the T-Bills were held by the RBI. However, with the introduction of auctioned T-Bills, more than 25% of the T-Bills are held by the investors other than RBI.

• Major Participants in the T-Bill market

The major participants of the T-Bill market in India are:

- (1) The RBI.
- (2) Commercial Banks.
- (3) Money market mutual funds.
- (4) Development finance institutions.
- (5) Primary and satellite dealers.
- (6) Provident funds & Pension Funds.
- (7) Foreign banks.
- (8) Foreign institutional investors.
- (9) Cooperative banks.
- (10) Regional rural banks, etc.

• Method of auctions of T-Bills/Government Securities:

Prior to introduction of auctions as the method of issuance, the interest rates were administratively fixed by the Government. With the introduction of auctions, the rate of interest (coupon rate) is fixed through a market-based price discovery process. Treasuries are issued through auctions by the RBI. These auctions are conducted on the electronic platform called as 'e-Auction', i.e., the Gov-



ernment Securities (GSEs) platform of the RBI. All members of e-Restr can place their bids in the auction. All settlement to such auctions are made on 'T + 1 basis', i.e., on the working day following the day of the auction (T day).

Auctions may either be yield-based or price-based:

Yield-based Auction: A yield-based auction is generally conducted when a new G-sec is issued. Investors bid in yield terms up to two decimal places (e.g., 9.19%, 9.20% etc.). Bids are accepted in ascending order and the cut-off yield is arrived at the yield corresponding to the highest amount of the auction. The cut-off yield is then fixed as the coupon rate for the security. Successful bidders are those who have bid at or below the cut-off yield. Bids which are higher than the cut-off yield are rejected. (In previous chapter, we have already discussed on yield rates).

Price-based Auction: A price-based auction is conducted when the Government of India issues securities which have already been issued earlier. Bidders quote in terms of price per ₹100 face value of the security, (e.g., ₹ 102.00, ₹ 101.00 ₹ 100.00, ₹ 99.00, etc. per ₹ 100). Bids are accepted in descending order and the successful bidders are those who have bid at or above the cut-off price. Bids which are below the cut-off price are rejected.

Depending upon the method of allocation to successful bidders, auction may be conducted on either Price basis or Multiple Price basis. In a Uniform Price auction, all the successful bidders are required to pay for the allotted quantity of securities at the same rate, i.e., at the highest cut-off rate, irrespective of the rate quoted by them. On the other hand, in a Multiple price auction, the successful bidders are required to pay for the allotted quantity of securities at the respective price/yield at which they have bid.

Each bidder, depending upon his eligibility, may bid in an auction under either of the following categories:

Competitive Bidding: In a competitive bidding, an investor bids at a specific price/yield and is allotted securities if the price/yield quoted is within the cut-off price/yield. Competitive bids are made by well-informed institutional investors such as banks, financial institutions, mutual funds and insurance companies. The minimum bid amount is ₹ 10,000 and in multiples of ₹ 10,000 in dated securities and minimum ₹ 25,000 in case of T-Bills and multiples of ₹ 10,000 thereafter.

Non-Competitive Bidding (NCB): With a view to providing retail investors, who may lack the knowledge about G-sec market or who have low demand, and to enable them to participate in the auction directly, the scheme of NCB in dated securities was introduced in 1997. The NCB is open to individuals, Hindu Undivided Families (HUFs), NRIs, cooperative banks, firms, companies, corporate bodies, institutions, provident funds, and RBI. Under this scheme, eligible investors apply for a certain amount of securities in an auction without mentioning price/yield. Such bidders are allotted securities at the weighted average price/yield of the auction. In every auction of dated securities, a maximum of 3% of the total amount is reserved for such non-competitive bids.

Table 2.1

Volume, Ownership and Composition of 91-Day T-Bills, Govt. of India 91-Days T-Bills (Outstanding) at Face Value

Period	RBI			Banks		State Government		Others		Total
	Tap	Ad. Issu	Auction	Tap	Auction	Tap	Auction	Tap	Auction	
March 31	₹	(₹)	(₹)	(₹)	(₹)	(₹)	(₹)	(₹)	(₹)	(₹)
1993	1,287	11,620	1,747	306	155	2,983	—	160	22	—
1997	6,544	34,130	1,468	—	7,760	6,539	1,282	405	665	—
1998	—	—	637	—	29	—	630	—	85	124
1999	—	—	224	—	307	—	—	—	244	58
2000	—	—	268	—	357	—	—	—	453	126
2001	—	—	67	—	868	—	—	—	151	636
2002	—	—	154	—	2,742	—	630	—	360	1,866
2003	—	—	—	—	6,427	—	800	—	780	7,927
2004	—	—	—	—	3,548	—	600	—	1,402	5,550
2005	—	—	—	—	21,126	—	1,725	—	6,828	29,679
2006	—	—	—	—	3,341	—	9,762	—	376	13,479
2007	—	—	—	—	12,684	—	34,315	—	6,705	53,704
2008	—	—	—	—	6,067	—	33,825	—	10,575	50,467
2009	—	—	—	—	8,914	—	544	—	25,982	35,430
2010	—	—	—	—	30,475	—	—	—	40,626	71,101
2011	—	—	—	—	23,580	—	11,790	—	36,420	61,790
2012	—	—	—	—	40,620	—	21,530	—	66,260	1,08,410
2013	—	—	—	—	34,590	—	26,230	—	42,356	1,07,176
2015	—	—	—	—	44,481	—	36,430	—	54,966	1,35,897
2016	—	—	—	—	61,610	—	45,300	—	58,142	1,65,052

Source: RBI Bulletin (various issues)

Table 2.1 shows that the banks and the state governments are the major holders of auctioned 91-Days T-Bills. Since 2011-12, however, the primary dealers (included in 'others') and the banks have been the major holders of these 91-Day T-Bills. Table 2.2 shows that the average daily turnover of 91-Days T-Bills has gradually increased during the last few years.

Table 2.2

Average Daily Turnover of Treasury Bills during 2011-15. (₹ in crore)

Year	T-Bills		
	91-Days	182-Days	364-Days
2011-12	1,596	400	750
2012-13	2,672	1,250	2,240
2013-14	4,085	1,330	1,990

Source: RBI Bulletin (various issues)

Table 2.3

Auction of 91-Days T-Bills: Competitive & Non-Competitive Bids

(₹ in crore)

Period	Gross Issues (₹)	Total Bids Received (₹)			% of Bid Apts. accepted to total Bids received	% of Non-Comp. Bids accepted to Gross Issues
		Competitive	Non-Competitive	Total		
1993-94	1250	—	—	494.12	41.1	—
1994-95	15,750	—	—	41,699.4	27.3	—
1995-96	12,490	17,666.73	2,030.8	19,697.53	56.5	14.15
1996-97	20,030	4,290.02	18,158.59	22,448.61	61.5	73.83
1997-98	25,320	37,093.70	14,784.40	51,878.10	41.1	39.74
1998-99	19,100	10,007.99	9,449.82	19,457.81	57.5	33.67
1999-00	16,697	15,029.55	5,569.00	30,598.55	66.5	33.52
2000-01	6,155	6,754.90	3,038.00	9,792.90	56.7	36.20
2001-02	7,253	10,025.01	7,905.00	17,930.01	57.1	28.0
2002-03	26,473	30,418.28	6,212.12	36,630.40	66.08	23.0
2003-04	36,786	81,906.06	2,785.56	84,691.62	48.0	7.4
2004-05	1,00,592	2,70,893.00	6,762.00	2,77,655.00	36.0	4.7
2005-06	1,05,424	1,69,913.00	29,243.00	1,99,156.00	54.0	28.0
2006-07	1,30,377	1,68,643.00	37,355.00	2,25,996.00	59.0	44.0
2007-08	2,10,387	3,01,804.00	1,01,024.00	4,02,828.00	52.0	48.0
2008-09	2,63,555	5,19,301.00	68,559.00	5,87,860.00	45.0	33.0
2009-10	2,76,500	8,34,676.00	5,004.00	8,40,186.00	23.5	1.76
2010-11	2,19,000	5,93,323.00	36,965.00	6,20,293.00	36.0	1.76
2011-12	3,33,000	9,00,379.00	1,14,902.00	10,17,281.00	36.3	36.3

Source: RBI Bulletin (various issues)

Table 2.3 shows that the total amount of bids received was higher than the value of gross issues or the total amount since 1993-94. It implies a favourable market response to the auctions of 91-Day T-Bills. Again, for most of the years during 1993-2012, the competitive bidders were allotted a greater part of the gross issues of the 91-Days T-Bills.

(91-Days T-Bills)

91-Days T-Bills were introduced in November 1986 to provide short-term investment opportunities to small institutions and others. These bills were periodically offered for sale by the RBI through uniform book auctions were held every month prior to July 1998. However, since July 1998, these auctions are made on every fortnight. These bills were introduced to develop the Indian money market. The commercial banks, corporate houses and other financial institutions found these bills convenient to put their short-term funds. These bills were issued at a discount on the face value at a minimum value of ₹ 1 lakh and a multiple thereof. These bills were eligible for SLR support as well as for borrowing from the RBI under the 'Stand-by finance facility'. The yield on 91-Days T-Bills were determined through the auction process of demand for and supply of these bills. However, the RBI phased out the auctions of these bills during April 1992 to May 1999. Though it

was reintroduced in May 1999, it was again discontinued during May 2001 to March 2003. However, it was again reintroduced in April 2005. Table - 2.4 indicates a rising volume of issues of 182-Day T-Bills particularly since 2005-06.

Table 2.4
Size of 182-Days T-Bills in India

Year	Bids received (₹)	Bids accepted (₹)	% of bids accepted to bids received (%)	Cut-off Yield (%) (at the end of the year)	Outstanding at the end of the year (₹)
1987-88	630.46	329.66	52.3	9.27	—
1988-89	2,141.11	1,371.60	64.1	9.42	566.3
1989-90	2,264.00	1,740.15	77.4	9.93	714.3
1990-91	4,334.43	1,425.93	33.0	10.68	1,077.86
1991-92	13,694.32	5,317.73	38.8	9.27	3,588.32
1992-93	3,038.55	2,960.08	97.4	9.63	3,063.4
1993-94	5,679.08	2,690.08	47.4	9.43	1,390.0
1994-95	731.5	305.0	41.8	8.44	—
1995-96	71,780.0	26,428.0	36.8	6.61	9,771.3
1996-97	76,438.0	38,812.23	50.6	6.20	15,285.3
1997-98	1,08,388.0	86,326.44	79.7	7.38	16,783.0
1998-99	1,13,909.9	84,303.0	74.0	5.10	21,176.0
1999-00	1,12,718.15	82,875.0	73.6	4.65	21,500.0
2000-01	1,25,144.0	83,801.0	66.9	5.49	20,261.0
2001-02	2,48,778.42	93,640.0	37.6	5.66	52,301.0

Source: RBI Bulletin (various issues)

• 364-Days T-Bills:

These T-Bills were introduced in April 1992 to replace the 182-Day T-Bills. In this case, a multiple (or discriminatory) price auction was conducted and the successful bidders had to pay price (yield) they had actually bid. At the initial stage, this auction was done on every fortnight. However, this auction was made on monthly basis since 1995-99. The features of this bill was similar to those of 182-Day T-Bills. Both these bills were not redeemable with the RBI. This T-Bill received a good response from the investors such as commercial banks and other financial institutions.

Table 2.5
Auctions of 364-Days T-Bills

Year	Gross Issues (Bids accepted) (₹)	Bids received (₹)	% of bids to bids received (%)	Outstanding (₹)
1992-93	8,796.47	18,799.08	46.8	3,786.47
1993-94	11,019.75	46,927.36	23.5	4,385.97
1994-95	16,857.00	30,727.22	54.8	8,165.12
1995-96	1,874.70	5,270.96	35.6	1,674.70
1996-97	8,240.00	15,244.80	54.1	8,140.40
1997-98	16,246.55	25,286.63	64.3	16,246.55
1998-99	10,100.50	16,845.97	60.0	10,100.50
1999-00	13,000.00	26,209.84	49.6	13,000.00
2000-01	13,000.00	32,506.55	40.0	13,000.00
2001-02	14,760.00	39,773.33	37.1	19,980.00
2002-03	28,126.00	68,597.70	41.0	28,126.00
2003-04	31,136.00	89,217.86	34.9	26,136.00
2004-05	47,132.00	1,10,575.30	42.6	47,132.00
2005-06	45,218.00	81,983.00	55.2	85,018.00
2006-07	53,813.00	1,83,307.40	29.4	55,813.00
2007-08	57,250.00	1,73,704.40	33.0	57,250.00
2008-09	56,550.00	1,66,171.00	34.0	56,550.00
2009-10	41,497.14	1,41,430.94	29.3	41,497.14
2010-11	42,048.12	1,39,091.25	30.2	42,048.12
2011-12	84,006.21	3,27,096.82	25.7	84,006.21

Source: RBI Bulletin (various issues)

Table 2.5 shows the continuously growing size of the issues of 364-Day T-Bills in India particularly since 1993-99.

15.11. Repo and Reverse Repo

The function of money market is to provide or maintain adequate liquidity in the economy so that businesses do not face working capital crunch. To maintain adequate liquidity, RBI uses Repo. A repo is a short-term money market instrument involving the purchase of securities by the RBI from market participants such as banks and other financial institutions.

Repo is a transaction in which a participant acquires funds immediately by selling securities to the RBI with an agreement to repurchase the same after a specified time at a specified price. So, it is a short-term sale of securities involving transfer of ownership of the securities. It also refers to a ready credit transaction, as it acquires funds by selling the security on a spot basis and repurchasing it later on a forward basis.

Reverse repo is exactly the opposite of repo — a party buys a security from another party with an agreement to sell it back on a later date at a specified price. This transaction is repo for one party and reverse repo for another party. Reverse repo sums some surplus on idle cash held by the party.

Repo and reverse repo are of two types — (i) inter-bank repo and (ii) RBI repo.

- (ii) **Inter-Bank Repo** : The RBI allows banks to resort to repo transactions among themselves. Along with primary dealers, are allowed to undertake ready forward transactions. Banking participants are allowed to lend money through reverse repo to other participants. Only inter-bank repo were allowed in the Indian money market during April 1981 to 1992. Consequently the security market boom, repo deals were limited to all securities excepting the Treasury Bills. This ban was withdrawn in June 1991 and only eligible participants were allowed to transact in this market. Now all central and state government rated securities and T-Bills of all maturities are eligible for repo.
- (iii) **RBI Repo** : The RBI also involves repo and reverse repo operations with primary dealers and scheduled commercial banks through its open market operations. Through repo rates, the RBI controls credit in the money market. The RBI introduced reverse repo system (selling government securities to repurchase later) during December 1992. Further, the RBI introduced a daily-based fixed rate repo auction system since 1997. In this system, the repo rates are pre-announced, and the banks or financial institutions are required to submit bids following the volume of repo.

• Features of Repurchase Agreement :

Following are the salient features of Repo :

- It is a transaction by which one party gets immediate funds by selling securities with an agreement to repurchase at a specified time and price.
- It is a transaction which involves both purchase or sale of securities for borrowing or lending of funds in the money market.
- It strikes a balance between demand for and supply of short-term funds in the money market.
- Commercial banks and primary dealers and non-banking institutions are allowed to undertake both Repo and Reverse Repo transactions.
- It helps to maintain liquidity in the system.
- Repo are backed by securities and carry collateral securities.

2.5.12. Other Money Market Instruments

In addition to the money market instruments already discussed, there are also other money market instruments which evolved during the post reform period in India.

- (a) **Participation Certificate or Inter-Bank Participation IPC or IBP** : It has emerged during 1980-89 in India. It is such a money market instrument that helps a banking organisation to pass on some part of its loan to other banks or financial institutions. The bank that purchases the PC becomes the co-lender. Two types of IBPs are observed during 1988 :
- IBP with risk-sharing, and
 - IBP without risk-sharing.
- If IBP is with risk-sharing then the issuer bank would not have to repay the purchasing bank or the co-lender if the loan portfolio does not perform well. But if it is without risk-sharing then the issuer bank would have to repay the purchasing bank or the co-lender even if the loan portfolio does not perform well.
- (b) **CCLO (Collateralised Borrowing and Lending Obligation)** : It was launched by the Credit Corporation of India Ltd. (CCIL) in 2003 to provide liquidity particularly to the non-bank entities which are not by institutions on accessing the call market.



It is an RBI approved Money Market instrument, this instrument is backed by government securities as collateral.

It comes as obligation on the borrower to repay the money borrowed along with interest on a predetermined future date. It provides a right and authority to the lender to receive money back alongwith interest on a predetermined future date. It comes a charge on the collateral provided by the borrower with CCIL for the purpose. The average daily turnover in the CCLO market was about ₹ 21,493 crore in 2011-12 and it increased to ₹ 1,29,638 crore in 2012-13.

2.5.13. Weaknesses of Indian Money Market

As compared to the money market of developed countries, Indian money market is not fully developed. Some shortcomings, particularly during the post-reform period are found in Indian money market. These are discussed below :

- Existence of unorganised money market** : There are both organised and unorganised money markets in India. The participants of unorganised money market (such as, indigenous banks, Mahajan, Mithli, etc.) are not regulated and controlled by the Reserve Bank of India (RBI) or the government. They do not obey the rules and regulations of the money market operations. They charge high rate of interest from the borrowers. Dual existence of organised and unorganised financial institutions causes a lack of transparency in the system.
- Lack of co-ordination** : Indian money market is decentralised and fragmented and there is no party in the management and policy determination. Lack of harmony and co-ordination among the participants are found in this system.
- Scarcity of funds** : Per capita income of the people of India is very low. So, the rate of savings remains at a low level in India. As a result, there is shortage of loanable funds in Indian money market.
- Underdeveloped bill market** : This is one of the striking deficiencies in Indian money market. The commercial bill market in India is underdeveloped. Underdeveloped bill market is an obstacle to the development of Indian Money Market.
- Lack of well organised banking system** : Banking system is the most important part of money market. Banks accept deposits and provide credit to the general people and industries and thus create credit in the system. But Indian banking sector is not well developed and it is mostly concentrated in urban areas. Rural people do not get adequate banking facilities. Thus, a bi-sided growth of the Indian money market is witnessed.
- High stamp duty** : Due to high stamp duty, people become discouraged to participate in Indian money market.
- Corruption** : Several corruptions and scams in Indian money market defamed the confidence of the general people who are not willing to participate in the money market.
- Exploitation** : Participants of unorganised money market (such as, Mahajan, merchants, indigenous bankers, etc.) charge an exorbitant rate of interest against loans provided by them. Farmers and small businessmen are exploited badly.
- Highly volatile call money market** : Call money market possesses a major part of Indian money market. Call money rates are too volatile. The RBI failed to control the activities of call money market for a long time. It hinders the development of such market in India.
- Lack of monetary stability** : Despite taking several measures, the RBI failed to maintain monetary stability in the economy as the unorganised money market cannot be controlled by the RBI.



- (iii) **Lack of financial services in rural areas** : Financial institutions in the Indian money market have developed particularly in urban areas. Rural India has been suffering from the non-availability of financial services. Due to this lop-sided growth in the Indian money market, rural people do not get the financial services. As a result, overall economic growth in the country suffers.
- (iv) **Increasing stressed assets with the banks** : Indian banking institutions, mainly the public sector banks (PSB) Banks, face the problem of gradual enhancement of stressed assets (i.e., non-performing assets). It creates lots of trouble in the system.
- (v) **Existence of unorganised sector** : Unorganised financial institutions in the Indian money market sometimes create trouble in the system.
- (vi) **Lack of specialised intermediaries** : Indian money market faces the shortage of specialised intermediaries. As a result, smooth flow of funds from the surplus economic unit to deficit economic unit get hampered.

Despite these weaknesses, Indian money market also possesses some advantages.

2.5.14. Reforms in Indian Money Market

Features of the Indian MML during Pre-reform period were as follows :

- (a) The money market was shallow in nature marked by a shortage of financial assets.
- (b) Greater part of the Indian money market was unorganised.
- (c) Banks often faced short-term liquidity problems to meet their statutory obligations.
- (d) In some other time, these banks were saddled with the problem of excess liquidity.
- (e) Administered interest rate of the RBI did not reflect the true scarcity value of the short-term funds.

• Steps taken for Money Market Reforms :

Several expert committees were formed from time to time to suggest measures for the reform of the Indian money market. Some of these committees were :

- (a) 1985 : Committee to review the working of the Monetary System was formed under the Chairmanship of Prof. Sukhamoy Chakravorty.
- (b) 1987 : Working Group on the Money Market was formed under the Chairmanship of N. Vaghul.
- (c) 1991 : Committee on Financial System was formed under the Chairmanship of M. Narasimham.
- (d) 1998 : Committee on Banking Sector Reforms was also formed under the Chairmanship of M. Narasimham.

• Actions based on the recommendations of those expert committees :

- (a) 1985 : **Chakravorty Committee** : Automatic recapitalisation of Budget deficit through the issue of ad hoc T-bills was discontinued and WMA (Ways & Means Advance at bank rate) was introduced in 1987.
- (b) 1987 : **Vaghul Committee** : As per its recommendations,
 - (i) the DFIE (Discount & Finance House of India) was set up in 1988.
 - (ii) Money market instruments such as CD (Certificate of Deposit) and Inter-Bank Participation Certificates were introduced since 1988-89. CP (Commercial Paper) was introduced since 1990.
 - (iii) Discount ceiling on call money was fixed in stages during 1988 and there was a gradual shift from administered interest rate to market-determined interest rate.



1991, 1998 : **Narasimham Committee** : As per its recommendations

- (i) The DIC (Discount Trading Corporation of India) was set up in 1991.
- (ii) Access to entry into the money market was gradually eased by :
 - (a) setting up 'Primary Dealer' (PD) system in 1995 and satellite dealer system in 1999.
 - (b) relaxing insurance contributions and subscription norms in respect of money market instruments.
 - (c) increasing the number of participants by allowing FI, MFI and Mutual Funds.
- (iii) Several financial innovations in instruments and methods were introduced. T-bills of varying maturities and auctioning of T-bills were introduced.
- (iv) The payment system infrastructure was strengthened with the introduction of Negotiated Dealing System (NDS) in February 2002. The NDS is an electronic platform for facilitating trading in Government Securities and Money Market Instruments. The NDS facilitates electronic submission of bids/application by members for primary issuance of Government Securities by RBI through auction and floatation.
- (v) The CCE (Clearing Corporation of India Ltd.) was set up in 2002 and Real Time Gross Settlement (RTGS) was introduced since 2004.
- (vi) CDO (Collateralised Borrowing & Lending Obligation) as money market instrument became operational since January 2003.

AS 10. Recent Trends in Indian Money Market

Since early 1990s, various pro-active measures have taken by the Reserve Bank of India (RBI) in order to strengthen its structure and enhancing the liquidity in the Indian money market still is undergoing the process of transformation. The important changes that took place in the money market during the last decade are discussed below :

- (i) **Privatisation of financial institutions** : The government of India has taken necessary measures to provide sufficient financial services to the people of India. The government of India has given more impetus on the establishment of financial institutions under private ownership. It has also opened up the insurance sector for the private insurers and allowed foreign direct investment (FDI) in the insurance sector upto 26 per cent (and subsequently upto 49% of the equity capital).
- (ii) **Restructuring the development financial institutions (DFIs)** : Development financial institutions have been given more powers and liberty in several matters such as providing long-term credit without government guarantee, operational flexibility, etc.
- (iii) **Restructuring of commercial banks** : The RBI has given more autonomy to the commercial banks in respect to their operations. The periphery of the operations of the commercial banks have been expanded. As a result, top line revenues (revenue generated from banking services, i.e., from sale of services) and bottom line revenues (i.e., net profits of banks) have increased significantly.
- (iv) **Introduction of Money Market Mutual Funds (MMMFs)** : Money market mutual fund (MMMF) was introduced in the system. It has been playing an important role towards the development of the money market. Its mode of functioning is that of mutual funds with the exception that here the corpus accumulated is invested in short-term money market instruments, such as commercial papers, certificate of deposits, call money, short-term government securities, etc.



- (6) **Introduction of repo :** In order to enhance liquidity in the system a new instrument, repo or repurchase agreement was introduced by the RBI since 2000 as part of the Liquidity Adjustment Facility (LAF). The RBI uses repo and reverse repo operations with primary dealers and scheduled commercial banks through its open market operations. Through repo repo, the RBI controls credit in the money market.
- (6) **Introduction of reverse repo :** Reverse repo is exactly the opposite of repo, i.e., excess funds of commercial banks are parked with the RBI and banks earn some yield. It is known as reverse repo. Through reverse repo rate, RBI controls credit in the system.
- (7) **Introduction of Market Stabilisation Scheme (MSS) :** It was introduced in 2004. The RBI, under this scheme, is permitted to issue short dated government securities and treasury bills for improving liquidity management in the system and maintaining stability in the foreign exchange market. It was especially used to adjust excess liquidity arising out of huge capital flows coming to India from abroad.
- (8) **Introduction of Liquidity Adjustment Facilities (LAF) :** This was introduced to ensure market liquidity on a daily basis and also transmit interest rate signals to markets. It consists of the daily infusion or absorption of liquidity on a repurchase basis.
- (9) **Introduction of Marginal Standing Facility (MSF) :** The 'MSF' is a relatively newer instrument. The RBI first announced about 'MSF' in the annual policy review for the financial year 2012-13. Under this facility, all scheduled commercial banks can borrow overnight from the RBI, up to 1% of their net demand and time liabilities. The facility is available for banks on all working days, except Saturday. The interest rate is fixed at 100 basis points (i.e. 1%) above the repo rate. Banks have to resort to the 'MSF' window to meet their emergency funding needs.
- (10) **Technological upgradation :** Upgraded technologies have been introduced in the money market. The establishment of the VSAT network and electronic dealing system was introduced in the money market in order to enrich a vibrant and transparent money market.
- (11) **Creating strong Call Money Market :** The RBI has taken a lot of initiatives to establish a strong call money market in the system. The market is also known as inter-bank market.
- (12) **Establishing a vibrant Treasury Bill Market :** The RBI has initiated to establish a vibrant Treasury Bill market to raise short-term funds required by the government to meet out the short-term liquidity crunch.
- (13) **Establishing an active Commercial Bill Market :** A commercial bill is a short term, negotiable and self-liquidating instrument with low risk. It enhances the liquidity to raise payment on a fixed date when goods are bought on credit. The RBI has taken necessary measures to establish a vibrant commercial bill market in the system.
- (14) **Creating more active Certificate of Deposit Market :** These are measured, negotiable and short-term instruments in home form issued by commercial banks, development banks and cooperative banks. These are subscribed by individuals and institutions. The RBI establishes certificate of deposit market in the system.
- (15) **Creating more active Commercial Paper Market :** A commercial paper is an unsecured short term promissory note, negotiable and transferable by endorsement and delivery with a fixed maturity period. It is generally issued at a discount by the leading creditworthy and higher rated corporate organisations to meet their working capital needs. The RBI has developed a vibrant commercial paper market in the economy.

13.17. Evaluation of Indian Money Market as of recent time

The working of the Indian money market can be evaluated as follows:

- (1) **Depth of the market :** The depth of the MM depends on the number and variety of financial instruments transacted in the MM. With an increase in the depth of the MM, the average price of a financial asset would not fluctuate much with large-scale buying or selling activities. If there is wide fluctuations in the average price of financial assets in the MM, it would imply that the market is incapable of absorbing the shocks of such large-scale buying and selling of securities. However, it has been observed that the Indian MM has gained considerable depth over the last few years. For instance, the volatility of call rates declined over years. The coefficient of variation in call rates was only 0.3 during 2007-09.
- (2) **Breadth of the market :** It depends to a large extent on the number of players or participants in the MM. With the increase in the number of participants in Indian MM, the market has become wider since late 1980s. So the breadth of the Indian MM has improved during the last one and half decades.
- (3) **Liquidity of the market :** It depends upon the ease with which any financial asset can be converted into cash. As the MM has become wider with entry of new participants, and the depth of the market has also improved over time, the Indian MM has become more capable of increasing the liquidity of financial assets.
- (4) **Induciveness of the market :** When a financial market becomes easily accessible to common people or investors, it becomes more inclusive. However, the Indian MM has some shortfalls in so far as its inclusiveness of the market is concerned. This is because most of the MM instruments like CDs, CPs, call money etc. can be accessed only by some large institutional investors. Though the forerunners of MMDs addresses this shortfall, the small investors are yet to get adequate access to this market in India. The existence of large unorganised segment in the Indian money market also accentuates this problem since a large section of rural sector or farmers still depend on rural moneylender or non-institutional sources of credit.
- (5) **Integrated nature of the market :** When the participants in any financial market can easily take the opportunity of arbitraging i.e. buying any financial asset at a lower price from one segment of the market and selling it at a high price in another segment of the market at the same time, then it is a sign of financial market integration. In that case, different money market rates such as repo rate, yield on TB, call rate etc. become more aligned and move together in similar direction. In case of Indian MM, it has been observed that the correlation coefficients between different MM rates have increased during 2001-06 compared to 1995-2000. Thus, the Indian MM shows a sign of greater integration among different segments of this market.

13.17. Measure for strengthening Indian Money Market

Money market plays an important role in the economic development of a country. Indian money market suffers from some loopholes. In order to plug such loopholes and for further improvement following steps can be taken:

- (1) An organised bill market needs to be developed.
- (2) Co-operative sector of money market should be subsumed into organised sector as far as possible.
- (3) Banking facilities are to be expanded. More banks must be set up in the rural areas.
- (4) Number of participants in the money market are to be increased by encouraging the general people to take part in it.



- (5) Development of money market is not possible until there are vibrant submarkets. A money submarket needs to be created for a wider and more extensive money market.
- (6) A robust surveillance system should be installed in order to track the malpractices or fraudulent activities perpetrated by the unscrupulous traders or participants.
- (7) More banking licenses should be issued to the financial institutions so that they get involved in the banking business and thereby expand banking services to rural India.
- (8) Necessary steps should be taken to prevent money laundering and black money transactions.
- (9) Necessary measures are to be taken to tame stubbornly high inflation.
- (10) The government should take adequate measure to strengthen the domestic currency and to bring about stability in the exchange rate of domestic currency with foreign currencies.
- (11) Necessary measures should be taken to control the unauthorised investment schemes advised by unscrupulous operators.
- (12) A robust, resilient and sustainable policy action is needed.
- (13) Non-performing assets of banks (particularly of PSU Banks) have been increasing by leaps and bounds. It needs to be controlled strictly.
- (14) Rural India lacks adequate banking facilities. So, the banking services are to be spread to the rural areas, and banking transaction cost should be reduced.
- (15) Rural people lacks financial literacy. So, in order to ensure optimum level of participation, the government and the regulatory authorities should conduct financial awareness programmes across the country.
- (16) More stringent norms and regulations must be imposed by the regulators.
- (17) Unholy nexus among the entrepreneurs, and banks' top-notch officials must be prevented.
- (18) Red-tapism in the activities of the public sector financial institutions has to be removed.
- (19) Co-ordination between money market and capital market has to be established.
- (20) Overall transparency in the activities of the financial institutions should be ensured.

● **Some recent steps taken by the central government:** Based on the Narbhai Committee Report (2015), the RBI has taken the initiative of establishing 'Payments Bank' in August 2015. It has given 'in principle' licence to 11 organisations (e.g., Department of Posts, Govt. of India, Aditya Birla Nuo, Airtel M. Commerce Service, Tech Mahindra, etc.) to establish these payments banks. The objectives are to encourage (i) small savings, and (ii) facilitate payments or remittance service to migrant workers, low-income households, small business enterprises, etc. These banks cannot undertake any lending activities, and the maximum limit in the demand deposits per account holder would be ₹ 1,00,000. Again, about 77% of these demand deposits are to be invested in SLR-eligible government securities. It is hoped that these banks can help the process of financial inclusion in India. The India post (the postal department of the government) has already planned to open 50 such payments banks within May 2017.

The central government has also taken the initiative of establishing a public sector financial institution, viz., the Micro Units Development and Refinance Agency Bank (MUDRA) in April 2015 to facilitate refinance to a large number of micro and small enterprises in India.

In August 2019, the union government has also announced merger of 10 public sector banks. The merger became effective since April, 2020. The objective is to improve the financial strength of public sector banks. We have already discussed this issue in Chapter 4.



14. Capital Market

Capital market is commonly known as the instrument of the national economy and represents the economic affairs of the country. It acts as an index of economic and industrial development of the economy. It is an important constituent of the financial system of a country. It is a market for raising new funds from debt funds and investing funds. A healthy capital market contributes to the growth by mobilising the funds from surplus economic units to deficit economic units and ensuring the same for production use. Capital market is concerned with the supply of long-term capital to the industries. So, capital market may be defined as a highly regulated market which provides permanent capital to the industry, trade and commerce. Corporate organisations raise long-term capital by issuing their shares and debentures from the capital market.

According to S. C. Kuchhal, "Capital market consists of a series of channels through which the savings of the community are made available for industrial and commercial enterprise and public undertakings." Thus, capital market can be defined as an institutional arrangement that facilitates transactions of long-term financial assets in an economy.

Economic development of a country largely depends on the effectiveness of its capital market. A healthy capital market ensures a constant flow of long-term capital to industry, trade and commerce.

14.1 Characteristics of Capital Market

Following are the important characteristics of the capital market.

1. **Source of fixed capital:** Capital market is the source of fixed capital to the industry, trade and commerce. Industries procure their long-term capital from this market either by issuing new securities or by borrowing long-term loans.
2. **Source of finance for the corporate sector:** Corporate organisations raise funds by issuing equity shares, preference shares, debentures, etc., in the capital market.
3. **Wide spread:** Capital market is well spread across the country. Facility of capital market may be extended crossing the national boundaries to the international level.
4. **Source of finance for the government:** Capital market is an important source of finance for the government. The government may raise long-term funds from this market by issuing various types of bonds mainly for bridging its fiscal deficit.
5. **Existence of brokers and sub-brokers:** Transactions are effected in this market through the registered brokers and sub-brokers. They possess a wide gamut of knowledge to act efficiently in this market.
6. **Regulated market:** Capital market is a highly regulated market. Here, transactions are done following specified rules and regulations and the participants are strictly regulated by the apex regulatory body. The Securities and Exchange Board of India (SEBI) is the capital market regulatory body in India. In USA, the capital market regulatory body is the Securities and Exchange Commission (SEC).
7. **Provide investment opportunities:** Capital market creates a good investment opportunity to the high net-worth investors (HNIs) and retail investors. Here, several types of securities are bought and sold. Investors, considering their risk-taking appetite, put their money into these securities and reap the benefits.
8. **Liquidity:** It is a highly liquid market. It provides a ready market to buy and sell various types of securities. In this market, securities of the corporate organisations can readily be converted into cash.
9. **Channelisation of funds:** Capital market acts as an efficient conduit for channelising the funds from the surplus economic units to the deficit economic units. It helps the corporate sector by providing them sufficient amount of capital.

10. **Large number of participants** : It possesses a large number of participants such as brokers, sub-brokers, portfolio consultants, etc., and they perform very actively. They possess a vast amount of knowledge about the market and render their astute services to the corporate organisations and general investors.

2.6.2. Functions of Capital Market

Capital market is the most important constituent of the 'financial' system of a country. It helps to accelerate the economic growth by providing sufficient amount of long-term capital to the public, trade and commerce. The main functions of capital market are discussed below :

1. **Supply of long-term capital** : Capital market provides long-term capital to entrepreneurs. Mainly it supplies fixed capital required for purchase of fixed assets and for expansion of business operations, etc. A buoyant capital market in a country ensures supply of sufficient amount of long-term capital needed for enhancing capacities of existing organisations, acquisition of fixed assets and meeting capital expenditure.
2. **Establish a ready market** : It provides a ready market where shares and debentures of corporate organisations are regularly traded. Investors and traders can buy and sell these securities in the stock market. It attracts general people to deploy their money in the capital market. It also ensures adequate amount of liquidity in the system.
3. **Capital formation** : Capital market provides an array of investment opportunities for the investors. Investors deploy their fund in the securities of the primary market (the new issue market) and the corporate sector raise capital from this market. Corporate organisations require these funds in production of goods and services. As a result, the production use of these funds ensure speedy capital formation in the country.
4. **Regulated market** : Capital market is a highly regulated market. In our country, the Securities and Exchange Board of India (SEBI) is the market watchdog. The SEBI is the main regulator of the Indian capital market.
5. **Provides investment opportunities** : Capital market provides a good investment opportunities to the retail or small investors as well as to the high networth individuals (HNIs). By deploying their money in the securities available at the capital market, they are able to appreciate their capital in the long-term. It is said that equity is the best class of asset over a long period of time. If rational and judicious investment is made in equity over a long period of time, an investor can create a handsome amount of wealth from his investment.
6. **Mobilising the savings** : Capital market mobilises the savings of the households and the corporates in a ready channelised form for the production of goods and services in industries. It acts as an efficient conduit for channelising the funds from the surplus economic units in the domestic economy where fund is needed for creation of real wealth. It ensures mobility of funds in the country and this ensures economic prosperity in the country.
7. **Rendering advisory functions** : Capital market comprises of large number of brokers, sub-brokers, portfolio consultants, underwriters, etc. These participants actively participate in the activities of the capital market. They possess huge knowledge in the activities of the market. They share their acquired knowledge with the investors and render invaluable services to help clients. Small investors get various types of information about the market and the companies. It helps them to take informed investment decisions.
8. **Trading of Government securities** : In the capital market, government securities such as shares and debentures of government companies are traded. Small investors can invest in the government securities by taking lesser amount of risk.

Underwriting functions : Underwriting of securities issued by companies is an important function of the capital market. It ensures the issuing companies to make the issue successful.

Provide capital to public sector undertakings (PSUs) : In our country, both public sector organisations as well as private sector organisations exist side by side. The government's stake in PSUs is more than fifty percent. Major part of the capital of these organisations is provided by the government. But for establishing the conglomerate and flagship organisations, huge amount of capital is needed. So, long-term capital is to be raised from the primary market by issuing the company's shares and debentures. Capital market provides such opportunities to these organisations to raise long-term capital by issuing their securities.

Ensuring economic growth : Capital market provides sufficient amount of capital to the corporate organisations which is deployed in their business, say, for creating infrastructural facilities in the country. In the long-run, with the steady growth of industry and infrastructural facilities in the country, the economy prospers and the economic growth is ensured.

Greater opportunity to savers & investors : Capital market provides opportunities to the savers and investors to deploy their investible fund in various types of securities. These funds are raised by the business firms for deploying in businesses for long-term.

2.6.3. Importance of Capital Market

Capital market plays a pivotal role towards sustainable economic growth of a country. A healthy capital market ensures supply of long-term capital to trade, industry and commerce. It boosts up economic activities in the country. Employment opportunities in the country get enhanced with the growth of industrial activities. It propels the per capita income in the country. Importance of capital market is enumerated below :

Establishment and expansion of industry : For establishing new industries and for expansion of existing industries, sufficient amount of long-term capital is needed. Capital market provides long-term financial assistance to trade, industry and commerce on a national scale. Corporate organisations raise long-term capital needed for expansion, modernisation and diversification of their existing units from the new issue market by issuing shares and debentures.

Encouragement to invest : Capital market provides a gallop of opportunities to the general investors to invest in shares and debentures of corporate organisations. By investing in the securities of capital market rationally and prudently, investors over a long period of time, are able to create handsome amount of wealth. It attracts the general investors to invest in securities of the capital market.

Creation of fixed capital : Capital market provides long-term capital to industries for investment in long-term assets. It helps to create fixed capital in the economy.

Generation of capital : Capital market mobilises the savings of the households and provides savers and long-term credit to trade, industry and commerce, and helps in capital formation. Corporate organisations raise long-term funds by issuing shares or debentures from the new issue market and the corpus so raised get deployed in various projects. It paves the way for generation of capital in the economy.

Economic growth : Capital market provides long-term capital to trade, industry and commerce as and when required. Sustainable economic growth of a country greatly depends on the existence of a buoyant capital market in the country. A well regulated and vibrant capital market contributes immensely for establishing a robust economy in the country.

6. **Continuous and ready market** : Capital market provides an opportunity to transact freely. It views a continuous and a ready market of securities and flow of resources in the system. Anybody can transact in shares and debentures in the secondary market at a price. Securities can be easily liquidated in this market as and when needed.
7. **Mobilisation of savings** : Capital market maintains the mobility of savings of the household. It acts as an efficient medium for channelling the funds for productive investment.
8. **Raising international funds** : Presently activities of the capital market are not confined within the country. Domestic companies are allowed to raise capital from the capital market by issuing their securities. It accentuates flow of foreign capital in the domestic economy. Developing countries require huge amount of funds for meeting their long-term requirements from the issue of various types of securities in the international market.
9. **Providing long-term loans** : Capital market provides long-term loans to trade, industry and commerce. Corporate organisations get long-term loans from insurance organisations and banking financial corporations on easy terms and conditions.
10. **Providing investment opportunities** : Small and high networth investors often get investment opportunities to deploy their investible fund in the capital market securities. Disinvested investors can make lots of money from this market over a long period of time.

2.6.4. Role of Capital Market

Capital market of a country plays a pivotal role in the economic growth of that country. It is the nerve centre of an economy. Without a bumper capital market in the economy, a country cannot prosper economically. It acts as efficient medium for channelling the savings of the households to the entrepreneurs to be deployed in their businesses. It ensures optimum usage of country's national resources, labour force and create real wealth in the economy. It propels the economic activities and thereby enhances per capita income in the society. It boosts up the economic growth of the country. Role of capital market is discussed below.

1. **Capital formation** : Speedy capital formation is a must for attaining higher economic growth in the country. Speedy capital formation ensures more production, more capacity utilisation, more capacity additions and thereby more employment generation. A strong, well structured and well regulated capital market can ensure speedy capital formation in the country.
2. **Provides long-term loans** : Capital market provides long-term loans to the industry, trade and commerce. For enhancing capacities and establishing newer businesses entrepreneurs, huge amount of capital is required. Apart from procuring membership capital, it also arranges for long-term credit to the entrepreneurs. A matured capital market creates a vibrant debt market which meets the requirement of debt capital of the entrepreneurs and help them to enhance their return on equity and earning per share.
3. **Helps to Government** : Capital market also provides sufficient amount of funds to the government. Government raises funds by issuing its securities in the primary market.
4. **Economic development** : Capital market provides long-term capital to trade, industry and commerce. It helps in achieving rapid industrialisation in the country by providing sufficient amount of long-term capital to the entrepreneurs as and when required. Rapid industrialisation in the country ensures optimum usage of natural and human resources. It brings economic prosperity in the country. In order to reach up higher economic growth on a sustainable basis, a healthy capital market must be established in the country. It is expected that such growth can bring in enough employment and income opportunities among the common people. This growth with equity ensures economic development.

Rendering advisory services to industry : A large number of specialised financial institutions in the capital market offer specialised services to the industry. These institutions provide a host of professional services to the entrepreneurs such as (i) underwriting services, (ii) portfolio management services, (iii) export advisory services to the management, etc. These valuable services provided by these institutions assist the business making process of management of the companies and help the management to attain their desired goals.

Credit continuous and ready market : Capital market creates a ready market where buying and selling of securities are made continuously. Stock market or stock exchange is that market where securities of the enlisted companies are traded continuously throughout the year and maintain liquidity in the system. In, investment and traders become encouraged to deploy their funds in the capital market.

Creation of fixed capital : Fixed capital is needed for enhancing the capacity of the existing business operations, establishing new business, buying fixed assets, etc. If the sources of the long-term capital to the industries is disrupted, capital formation in the country gets stalled and it affects the economy adversely. When there exists a strong, well structured and regulated capital market in the country, supply of long-term capital to the industries gets unobstructed and it helps to create fixed capital in the economy.

Constant flow of capital : An efficient capital market ensures a constant flow of capital to the industries and ensures smooth running of business. With the expansion, diversification and modernisation of business, huge amount of long-term capital is needed. A healthy capital market ensures supply of such long-term capital to industries without interruption.

Establishment and expansion of industry : In order to attain higher economic growth, new industries especially manufacturing industries are to be established as they require huge amount of labour and other factors of production. They create job opportunities in the country for establishing new industries, huge amount of fixed capital is also needed. An efficient capital market provides constant flow of fixed capital to the entrepreneurs for establishing new industries in the country. Moreover, for expansion of existing businesses, huge amount of long-term capital is required. Capital market provides long-term capital for the existing organisations by expanding their live-prime across the country and abroad.

Enhancement of goodwill of the firm : Shares of the companies may be listed on a recognised stock exchange for facilitating trading and maintaining liquidity of the stock. When company performs for a long period of time, there is an upsurge in the price of the share on a sustainable basis and it creates wealth for its shareholders. A well governed company enhances its market capitalisation of its shares and creates long-term wealth for its shareholders. It creates the reputation of the firm. So, capital market provides opportunity to a company to gain wealth for its shareholders and to enhance its goodwill in the market.

1.3 Components of Indian Capital Market

The capital market can broadly be segmented into two parts :

- (i) The primary market or the New Issues market, and
- (ii) The Secondary Market or the market where second-hand (or listed) securities are transacted (or, in stock exchange).

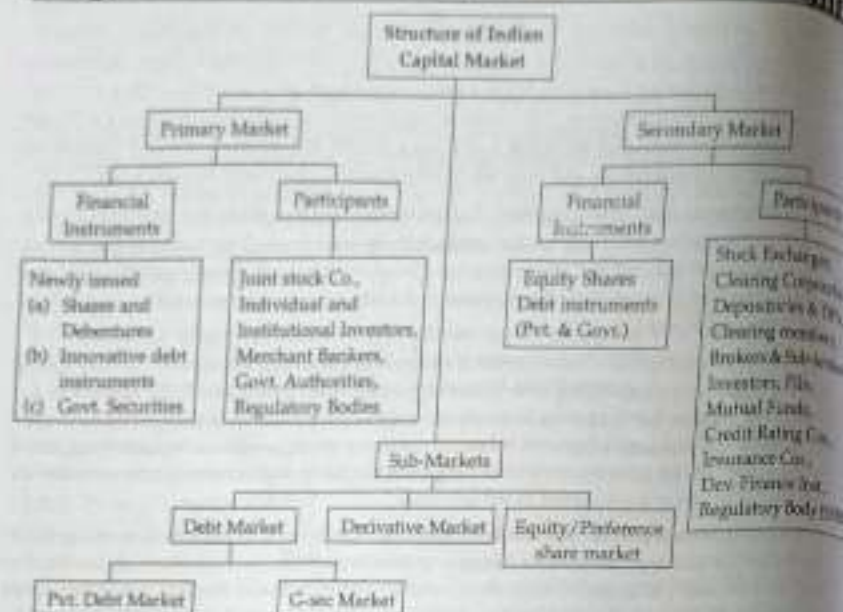


Chart - 17

1. (a) **Primary Market** : The primary market (also called as the direct market) deals in issues of long-term securities or new financial claims. Any company places its financial securities (or new issues) for public subscription (called as IPO or Initial Public Offering) through this primary market. So, the primary market is also called as the new issues market. It is also called as the 'direct market' because it makes an arrangement for mobilization of savings and direct supply of such mobilized funds to the business houses (viz. the borrowers). In this market, the securities are offered to the investors for the first time.
- (b) **Financial instruments transacted in the primary market** : The financial instruments which are transacted in the primary market are as follows :
 - (i) Newly issued equity, preference shares and debentures,
 - (ii) Newly issued innovative debt instruments, say, the floating rate bonds, indexed bonds, deep discount bonds etc.
 - (iii) Newly issued government securities, say, the dated government securities (G-Secs).

In the primary market, the new issues can be classified into : (i) public issue, (ii) rights issue and (iii) preferential issue (or private placement). When any unlisted company makes either a fresh issue of securities or an offer for sale of existing securities for the first time to the public, it is called public issue or Initial Public Offering (IPO). When any already listed company follows this process, then it is called IPO or Follow-on Public Offering or Further Public Offering. Whenever an existing listed company proposes to issue fresh securities to its existing shareholders (who have the first



right to subscribe to such fresh issue), this process is known as 'Rights Issue'. Again, when any listed company issues fresh shares to selected group of persons (which are neither rights issue nor public issue) then this process is known as 'Preferential Issue'.

Dated G-Secs are securities which carry a fixed or floating coupon rate (interest rate) which is paid on the face value, on half-yearly basis. Generally, the tenure of dated securities is between 5 years and 30 years. In the recent auction calendar for dated G-Secs, there is a plan to issue 40 year dated security in 2015-16. The Public Debt Office (PDO) of the Reserve Bank of India acts as the registry/depository of G-Secs and deals with the issue, interest payment and repayment of principal at maturity. Most of the dated securities are fixed coupon securities.

The innovative instruments such as Floating Rate Bonds (FRB), Capital Indexed Bonds (CIBs) etc. are also issued in this market. The FRBs are securities which do not have a fixed coupon rate. The coupon is re-set at pre-announced intervals (say, every six months or one year) by adding a spread over a base rate. In case of CIBs, the principal amount is linked to an accepted index of inflation with a view to protecting the principal amount of the investors from inflation. For example, a 5 year capital indexed bond, was first issued by the government in December 1997 which matured in 2002.

- (c) **Major participants in the Primary market** : The major participants in the primary market include the joint stock companies, the individual and institutional investors, the merchant bankers, government authorities, the regulatory body (viz. the SEBI) etc.

When any company wants to issue new shares in the primary market then it has to engage any 'merchant banking organization' that offers specialized financial services including 'issue management' to such companies. Such merchant bankers are often called as the 'Lead Merchant Bankers' or 'Lead Managers' in the issue. In some cases, the company and its Lead Merchant Banker fix a particular price prior to the new issue (say, ₹ 110 per share). However, in some other cases, they either mention a floor price or a 'price band' (say, 20% that means the price should not be more than 20% of the floor price). In this process, the buyers or the applicants bid for those new issues quoting the price and the quantity they would like to purchase. This process helps the company to understand the market demand for these securities. This process is known as the process of 'price discovery' or the process of 'Book Building'.

2. (a) **Secondary market** : The Secondary market, on the other hand, is called as the 'indirect market'. This market deals with old and second-hand securities. So, this market deals in such securities which have already been issued and listed in some stock exchanges for their further transactions. This market is also known as 'indirect market' because it indirectly contributes to the supply of required capital for business enterprises by giving them the scope of making 'old' securities more liquid.
- (b) **Financial instruments transacted in the secondary market** : The financial instruments which are transacted in the secondary market include (i) the equity share of listed companies (i.e. these shares are listed with the stock exchanges), (ii) the debt instruments (both private and government), and (iii) derivative instruments.

In addition to the 'direct' financial instruments, some 'derivative' instruments are also traded in the secondary market. A contract which derives its value from the prices or price index of underlying securities (say, the stock price index of the Bombay Stock Exchange (BSE), viz. SENSEX; the stock price index of the National Stock Exchange (NSE), viz. NIFTY, etc.) can be considered as the derivative. Four types of derivative instruments are now traded in the Indian capital market, viz. forward, future, option and swap. For instance,



the stock index futures traded in the NSE include Bank Nifty, CNX 100, Nifty India, etc. Again, some commodity futures (say, in respect of gold and silver) are traded in the National Commodity and Derivative Exchange Ltd. (NCDEX) and in the Multi Commodity Exchange (MCX).

Thus, in the Indian capital market, we have sub-markets like the debt market, the derivatives market and the equity market.

- (c) **Main participants in the secondary market:** The main participants of the secondary segment of the Indian capital market are – (i) the regulatory body, viz., the Securities and Exchange Board of India (SEBI), (ii) the stock exchanges, (iii) the clearing corporations, clearing houses, (iv) the depositories and depository participants, (v) the custodians, (vi) the clearing members, (vii) the stock brokers and sub-brokers, (viii) the domestic investors, (ix) the Foreign Institutional Investors (FII), (x) the mutual fund organisations, (xi) the credit rating agencies, (xii) the development finance institutions, (xiii) the insurance companies, etc.

In the secondary market, the investors buy/sell securities through stock exchange. A stock exchange is the single most important institution in the secondary market by providing a platform to the investors for buying and selling securities. The stock exchanges are either association of persons or are formed as companies for the purpose of facilitating the buying and selling of securities by the public and other institutions. At present, the stock exchanges in India operate with due recognition from SEBI (Securities and Exchange Board of India) or from the Government of India under the Securities Contract (Regulation) Act, 1956. The SEBI is the regulatory body of the Indian capital market. It was established in 1988 and became operative since 1992.

At present, there are four national level stock exchanges in India, viz., Bombay Stock Exchange Ltd. (BSE), National Stock Exchange Ltd. (NSE), Over the Counter Exchange of India Ltd. (OTCEI) and Inter-connected Stock Exchange of India Ltd. (ISSE).

On the other hand, about 38 stock exchanges are functioning at the regional level (e.g., Ahmedabad Stock Exchange, Bhopal Stock Exchange, Calcutta Stock Exchange, etc.). In case of OTCEI, there is no physical existence of the stock exchange. The investor has an access to this stock exchange through internet.

The SEBI was promoted by 18 regional stock exchanges of India to provide trading connectivity to all participating stock exchanges. The investors can access these stock exchanges through **stock brokers** who are the members of these stock exchanges. So, a stock broker is a member of a recognised stock exchange who buys and sells securities on behalf of his clients. He charges a commission (brokerage fee) to the clients for providing this service. The sub-brokers, who are not members of any stock exchange, also provide this service on behalf of a broker.

The credit rating agencies (e.g., the Credit Rating Information Services of India Ltd. or CRISIL) provide fee-based services for evaluating the creditworthiness of the issuer of any security and the capability to meet its credit obligations. Thus, any financial instrument with a good credit rating such as AAA or AAA⁺ can easily be marketed.

The development finance institutions such as IFCI, IDBI, SIDBI, SFC, EXIM bank etc., the mutual fund organisations like the UTI Mutual Fund, Birla Mutual Fund, etc., the insurance companies like LIC, GIC, Birla Sunlife, etc. also participate in the secondary market.



Other participants in the secondary market who facilitate the clearing and settlement of transactions are as follows:

Depository: A depository is an organization that holds securities of a shareholder in an electronic form (or dematerialized form/deemat form) and facilitates the transfer of ownership of securities on settlement dates. An investor who wants to avail of these services has to open an account with the depository through Depository Participant (DP). For example, the National Securities Depository Ltd. (NSDL) and Central Depositories Services Ltd. (CDSL) provide depository services in Indian capital market. On the other hand, the banks such as HDBC or ICICI work as DPs.

Custodian: A custodian is an intermediary who provides custodial services to its clients through – (i) safe-keeping of securities of the clients, (ii) maintaining an account of these securities, (iii) collecting the benefits/rights accruing to the clients in respect of these securities, etc. For example, the Stock Holding Corporation of India Ltd. (SHCIL) used to provide such services to UTI and LIC.

Clearing Corporation: A Clearing Corporation, e.g., National Securities Clearing Corporation (NSCCL), is responsible for post-trade activities of a stock exchange. Clearing and settlement of trades and risk management are the main functions of a clearing corporation. It determines the funds/securities obligations of the trading members and ensures that trading members meet their obligations.

Clearing members: In the capital market segment, all trading members of a stock exchange are required to become the clearing members of the clearing corporation. They are responsible to settle their obligations as determined by the clearing corporation.

Clearing Banks: The clearing banks are the key links between the clearing members and the clearing corporation for the settlement of funds. Every clearing member is required to open a 'settlement account' with one of the clearing banks. Based on its obligation as determined through clearing, the clearing members make funds available in the clearing account (i.e. 'pay-in' and receive funds in case of 'pay-out').

Settle-day: When the stock exchange makes payment/delivers securities to the broker.

Pay-day: When the Brokers make payment/deliver securities to the stock exchange.

4.5 Features of Indian Capital Market

The features of Indian capital market are discussed below:

- Providing long-term fund:** Indian capital market makes arrangement for providing long-term funds to industry, trade and commerce. It provides a continuous flow of funds to the corporate sector and thereby helps them to maintain a steady flow of business operations.
- Insufficient specialised institutions:** There is a dearth of sufficient specialised financial institutions, such as, industrial banks, underwriting institutions, hedge funds, private equity, etc., in our capital market.
- Presence of brokers and sub-brokers:** In the Indian capital market, there exist sufficient numbers of brokers and sub-brokers. They help the investors and traders to transact with securities in the stock market. They possess sufficient knowledge about the stock market. They share their knowledge with the investors. As a result, investors are able to take informed and prudent investment decisions.
- Market regulator:** Indian capital market is regulated by the Securities and Exchange Board of India (SEBI). The SEBI, the market watchdog, acts as the apex regulatory body in the Indian capital market. It regulates various aspects of the capital market. The SEBI always tries to maintain discipline in the operations of the capital market and thereby instils confidence in the minds of the investors.

- (5) **Promoting economic growth and development** : Capital market in India plays a pivotal role towards the economic growth and development of the country. It provides sufficient amount of long-term capital to the industry, trade and commerce and helps them to grow leaps and bounds. It supports the rapid economic growth of the country. The pace of economic growth vis-a-vis economic growth largely depends on the effectiveness of the capital market in a country. Indian capital market has also been playing an important role for promoting economic development of the country.
- (6) **Government's endeavour** : The government of India has put a huge endeavour to build a strong capital market in the country. Government of India had established the Live Stock of India by enacting the LTI Act in the parliament in 1963, and established several development banks and other specialised financial institutions to strengthen the structure of the Indian capital market.
- (7) **Role of Foreign Institutional Investors (FIIs)** : India being the fastest growing country among the developing economies, attracts large number of foreign institutional investors (FIIs) in her capital market. India is considered as the most favoured investment destination among the FIIs. So, huge amount of foreign fund is invested in the Indian capital market by the FIIs. Indian stock market is mostly driven by the FIIs.
- (8) **Lack of transparency and competence of brokers** : There is an utter lack of transparency, integrity, competence with law and ethics in dealing with securities by the brokers and brokers, etc.
- (9) **Scams** : Indian capital market witnessed a number of large scams, such as, Haridial Malwa Scam, Ketan Parekh Scam, UTI Scam, etc. Investors' confidence were shaken by these scams in the capital market.
- (10) **Insider trading** : Indian capital market has also witnessed a number of insider trading of securities. It reduces confidence of the investors.
- (11) **Existence of credit rating agencies** : There are some credit rating agencies in the Indian capital market like that of developed countries. These rating agencies play an important role in the functioning of capital market. They assess the creditworthiness of the issuing companies and help the investors to take the informed investment decisions according to their risk taking appetite. In Indian capital market, credit rating agencies are :
- Credit Rating Information Services of India Ltd. (CRISIL)**
[CRISIL is the subsidiary of the Standard and Poor's (S & P), the largest credit rating agency of USA which holds 67.7% stake of CRISIL.]
 - Investment Information and Credit Rating Agency (ICRA)**
[ICRA has an international tie up with Moody's Investors Services. Moody's Investments Company India (Pvt.) Ltd. is the largest shareholder in the ICRA.]
 - Credit Analysis and Research Ltd. (CARE)**
 - OPIDA Individual Credit Rating Agency of India Limited (OICRA)**
 - Duff and Phelps Credit Rating Agency of India Limited (DCR)**
- (12) **Helps the national economy** : Indian capital market has been contributing immensely towards economic growth of the country. It provides sufficient amount of fixed capital to entrepreneurs to set up new industries and to expand the existing industries. It boosts up the national economy.

1.1.1 Primary Market or New Issue Market

The primary market or the new issue market is a market for new issues of securities such as equity shares, preference shares, debentures, bonds, etc. It is the market for fresh capital through which the corporate organisations for investments in productive purposes. In the primary market, corporate organisations raise capital by issuing shares, debentures or bonds.

According to Prof. Y. K. Bhushan, "new issue market is concerned with the flotation and disposal of new issues of shares and debentures through their allotment to persons and organisations."

Features of Primary Market

Following are the salient features of the primary or new issue market :

- The market deals with new issues. In this market, the securities which are not issued in the public previously, are issued for the first time to the public.
- Corporate organisations raise fresh capital from this market by issuing their securities.
- The market is not confined to a particular place.
- The market renders specialised services to the entrepreneurs by providing fresh capital (new-issued services), etc.
- Activities of this market are not centrally controlled. However, the procedures are guided by the SEBI norms.
- The market provides the scope for investments in new securities to the investors.
- Condition of this market depends on the economic situation of the country. When the economic condition of the country is good, primary market performs well. On the other hand, it does not do well when the economic situation remains weak.

1.1.2 Secondary Market or Share Market

A secondary market or share market or stock exchange is a highly organised market governed by specific rules and regulations where the listed securities (such as, shares and debentures) of corporate organisations are regularly transacted.

According to securities contracts (Regulatory Act, 1956) "Stock exchange or share market is an association, organisation or body of individuals, whether incorporated or not, established for the purpose of assisting, regulating and controlling the business in buying, selling and dealing in securities."

Stock exchange acts as an intermediary between the investors and the corporate sector. Herein, all types of listed securities are regularly transacted or traded in the stock exchange. It constitutes an organised market where securities issued by the central government and state governments and listed stock companies are also traded. It contributes to economic growth through allocation of funds to the most efficient channel through the process of disinvestment or investment. The trading in stock exchange is effected on behalf of the purchaser or seller by the members of the stock exchange known as brokers. India has the largest numbers of stock exchanges in the world. Presently, there are 27 recognised stock exchanges in India. These are closely regulated by the SEBI.

Table - 2.6
Growth of Stock Exchanges in India

Year	No. of Stock Exchanges	No. of Listed Companies	Market Capitalization (₹ in crores)
1946	7	1,125	95
1961	7	1,203	1,292
1971	8	1,599	2,675
1980	9	2,268	6,776
1990-91	22	2,471	80,836
1999-00	23	5,815	1,12,842
2012-13	26	5,133	62,14,941
2014-15	27*	5,835	2,00,79,412

Source : SEBI (Annual Reports) [*It includes 6 commodity exchanges]

Table - 2.6 shows that the both the number stock exchanges and listed companies have grown and increased in the Indian Capital Market since 1946. The market capitalization (viz., the value of transaction of stocks in those stock exchanges at current market prices) has also increased to a large extent particularly since 1990-91.

• Features of Secondary Market :

Following are important features of a stock exchange or share market :

- (1) **Formed as joint stock company** : A stock exchange or share market is set up as a joint stock company.
- (2) **Location** : A stock exchange or share market has a geographical existence. It is established in big cities or towns such as Mumbai Stock Exchange, Kolkata Stock Exchange, etc.
- (3) **Execution function** : It is an organised market. Here, registered brokers participate in executing transactions by observing specific rules and regulations.
- (4) **Dealing with existing securities** : In the share market, existing listed securities of corporate organisations are traded or transacted.
- (5) **Link between savings and investment** : It acts as a liaison between savings and investment. It helps the investors in investing their funds in securities of the corporate organisations.
- (6) **Ready market** : It is a ready market for securities. Shares and debentures are freely transferred from one person to another through this market.
- (7) **Speculation** : Some speculative transactions such as derivative transactions are offered in this market. Normal speculation is healthy for the market.
- (8) **Existence of brokers** : Brokers are the intermediaries through which transactions are effected. They are required to be registered with a stock exchange. They have to abide by the norms and regulations of the share market. They are the members of the stock exchange.
- (9) **Liquidity** : Stock exchange provides a continuous market for the securities. So, it brings liquidity in the system.
- (10) **Expansion of investors' base** : A stock exchange provides investment opportunities to all types of investors across the country. This helps to prevent concentration of economic power and wide fluctuations in security prices.

• Functionaries of Stock Exchanges :

Only those who are registered with a stock exchange can transact in a stock exchange. Only those who are registered members of that stock exchange can transact in a stock exchange. General public and traders transact securities in the stock exchange through a functionary. In order to get registered in the stock exchange, the functionaries have to pay the registration fees and become registered members of the stock exchange. They have to pay the annual fees. They must abide by the rules and regulations of the stock exchanges. So, the functionaries of the stock exchanges are the registered members of the stock exchanges who perform the operations of buying and selling of securities by abiding by the norms and regulations of the exchange. Types of functionaries of stock exchange are :

- (i) Brokers.
- (ii) Sub-brokers.
- (iii) Dealers.
- (iv) Institutional Investors.
- (v) Portfolio consultants, and
- (vi) Non-resident Indians.

We shall discuss about some of these participants in subsequent sections.

• Role of Share Market :

Share market or stock exchange is an organised market governed by specific norms and regulations, where the listed securities of corporate organisations are transacted.

A share market acts as an intermediary between investors and companies. It plays a pivotal role in the economic growth of a country. Economic condition of a country transpires through the share market. It is known as a barometer of the national economy. It plays an immense role towards the development of a country's economy. The role of share market may be understood from the following points :

(i) From the View Point of Investors :

- (i) **Inducement in investment in securities** : Share market creates scope for people to invest in various securities of companies and helps them to generate handsome returns in the long-term from the market. Investors by accumulating shares of good companies are able to create wealth.
- (ii) **Transferability of securities** : It provides a ready market for buying and selling of securities. It ensures transferability of shares freely. Investors may liquidate their holding in the market as and when fund is needed. It maintains liquidity and helps in reshuffling the investors' portfolios.
- (iii) **Protection of investors' interest** : Share market is strictly regulated by various rules, laws and buy-laws for protecting investors' interest. Listed companies have to abide by the listing norms of SEBI as per clause 49A, various norms as per Companies Act 2013 and securities contracts (Regulation) Act. As a result, investors' interest is safeguarded to a great extent.
- (iv) **Evaluation of securities** : Prices of shares in the share market fluctuate often. Investors get the opportunity to buy the undervalued shares by evaluating the fundamentals of the companies from the available data in the stock exchange.



- (vi) **Publication of information** : As per the listing norms, listed companies supply information about the companies. This information is made available for the general investors get the updated relevant information and take their investment decisions.
- (vii) **Mortgaging of securities** : Investors may raise loans by mortgaging shares of listed companies (e.g., high-value shares with high degree of market capitalization, i.e., whose shares are transacted most in a stock exchange) from banks and other financial institutions. Long-term investors without liquidating their holding may raise funds only by mortgaging their securities. It encourages the investors to keep their money invested for a long period.
- (viii) **Diversification of investments** : Share market encourages the investors to diversify their investments for reducing the risks of investments. It provides opportunity to invest in shares and debentures of companies across various sectors (such as – FMCG, IT, banking and insurance, steel, etc.) and are able to reduce the overall risks of investments.

(2) From the View Point of Company :

- (i) **Procurement of capital** : Share market acts as an intermediary between the companies and investors. Companies raise capital by issuing securities from the primary market and get the securities listed on a regulated stock exchange for facilitating trading of such securities. Stock market ensures transaction of securities freely and helps the companies to raise capital from the primary market.
- (ii) **Creation of goodwill** : When the shares of a company get enlisted on a recognised stock exchange, it elevates the status of that company. If the listed company is managed professionally and the company earns sufficient profits, share price of that company is on an upward trajectory. As a result, over a longer period of time the market capitalisation [$\text{Number of outstanding shares} \times \text{Market price of share}$] of that company increases and it creates wealth for the long-term investors. Valued investors get attracted towards the company and the status of the company gets elevated.
- (iii) **Enhancement of management efficiency** : When a company is not run prudently and professionally then a negative impact upon the share price is witnessed in the market, it undermines the liability of the management or board. The Board of Directors constantly put emphasis on prudent running of business. It creates a moral pressure on the board of directors.
- (iv) **Generating investors' faith** : If a company is run prudently and profitably then a positive movement in the share price is seen in the share market. On the other hand, when the company is not run prudently and profitably, price of the shares gets dragged down continuously. So, the investors observing the share price over a time period, get an idea about the performance of a company and the investors decide whether they should keep their faith on the management or not.
- (v) **Well organised and regulated** : A share market is a highly regulated market. All listed companies abide by the established rules and regulations. Listed companies are compelled to observe established rules and regulations of the stock exchange.
- (vi) **Diffusion of shareholding** : Shares of the listed companies are traded regularly. It facilitates the companies to diffuse ownership of securities across the country.

From the View Point of the Society :

- (i) **Overall economic growth** : Share market plays a pivotal role towards the growth of the financial economy. It channelsises the investments of the general people to the effective investment and helps in capital formation. It leads to overall economic growth of the country.
- (ii) **Optimum use of national resources** : Share market accretes the corporate organisations to raise necessary capital for effective investments in production of goods and services. Corporate sector gets required amount of capital by issuing various types of securities in the market. It ensures optimum use of national resources effectively and efficiently.
- (iii) **Enhances the saving habits** : Share market provides a glimpse of opportunities to the investors to invest in securities of companies across various sectors. General people get attracted to invest their money and are able to generate a fair return. It inculcates the saving habit among the general people.
- (iv) **Creation of awareness** : Share market adopts various measures to provide necessary information to the general people. It conducts various awareness programmes for spreading the equity cult among the general people. Investors become aware about various intricacies of the stock trading and be able to take informed investing decisions.

Drawbacks of Share Market :

- (i) **Share market provides immense opportunities to the investors to invest their investible funds in various types of companies across various sectors, and create wealth in the long run. But in the short run, some unethical and illegal practices are indulged by unscrupulous traders, speculators or operators to earn windfall gains in short span of time. It affects the innocent investors and depletes the hard-earned money. Some shortcomings are listed in the stock market, these are discussed below.**
- (ii) **Unethical practices** : Unscrupulous traders and brokers indulge in unethical practices in executing transactions which mislead innocent investors thereby causing huge loss to the investors.
- (iii) **Riskless speculation** : Sometimes investors confront with reckless speculation of the operators or traders. General investors are usually lured by such temptations and get involved in such speculative transactions and lose their money.
- (iv) **Unethical practices indulged by brokers** : Stock brokers are to abide by the rules and regulations of the stock exchange and model code of conduct of the SEBI. But very often it is witnessed that brokers do not obey the code of conduct. They become involved in unethical practices. As a result, sanctity of the share market gets impaired.
- (v) **Abuse of derivative transactions** : Derivative is a sophisticated financial instrument used by the investors for hedging their portfolio. It acts as insurance against portfolio. It creates and minimises the risk of portfolio. Professional traders make use of derivatives such as swap trading, option trading, etc. Very often small investors with little amount of funds get trapped and are involved in such derivative trading and suffer huge losses. Only professional traders having sufficient amount of knowledge and skill should deal with derivative techniques and small investors do not have such skill.

(5) **Illegal trading:** Unscrupulous traders and brokers involve in illegal trading such as dabba trading, etc. It weakens the strength of the market.

• Remedial Measures:

In order to remove the defects of the share market, some remedial measures may be taken. These are discussed below:

- (1) More transparency in the transactions of the stock trading should be brought in.
- (2) Strong surveillance system should be installed in order to track unethical practices.
- (3) The SEBI must take stern punitive action against the unscrupulous traders and brokers who indulge in unethical practices.
- (4) The SEBI and stock exchanges should convene investors' awareness programmes in order to educate retail investors about the financial market.
- (5) The SEBI and Stock exchanges should adopt proactive measures to check reckless speculative trading in the stock market which have corrosive impact on the retail investors' interest.
- (6) It is to be ensured that listed companies must provide relevant information to the concerned stock exchange.
- (7) 'Insider trading' must be prevented strictly.
- (8) Investors' grievances should be redressed quickly.
- (9) The SEBI must come out with strong surveillance in order to spot and smother illegal trading mechanism such as dabba trading.
[Dabba trading is an illegal form of trading banned by the SEBI in which traders and brokers use black money to earn windfall gains]
- (10) The SEBI must ensure that the participants of the market such as traders, brokers, sub-brokers, portfolio consultants maintain probity and ethics while dealing in securities.

2.5.8. Relation between Primary Market and Secondary Market

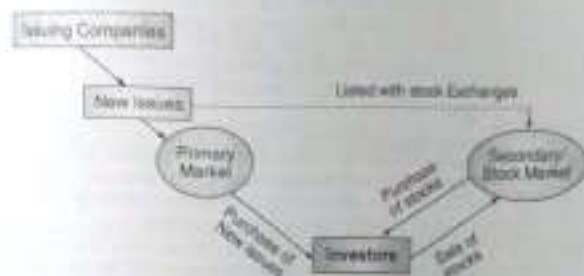
New issue market or primary market is that market where new securities such as equity shares, preference shares and debentures of corporate organisations are issued for raising fresh capital.

A secondary market or share market is an organised market place where both buying and selling of existing securities take place.

There exists a close relation between the primary market and secondary market. Primary market provides opportunity to the corporate organisations to raise fresh capital by issuing their shares and debentures from the general public and institutions. Afterwards, these securities get listed in the recognised stock exchanges. Investors subscribe the securities of the new issue of companies if they find that the issuing company has the potentials to create wealth for its stakeholders in the long run. Investors may sell their securities in the secondary market as and when they get the desired returns from their investments in the secondary market. The secondary market helps the investors to liquidate their securities which they subscribed from the primary market. Without the service of the secondary market, primary market will not be able to help the corporate organisations to raise capital from their issues to the public. As a result, corporate organisations will not be able to raise sufficient amount of capital needed for expansion, diversification and modernisation of their organisations. Success of the new issues in the primary market largely depends on the secondary

market in share market. When the condition of the share market remains lacklustre or depressed, at such times, new issues in the primary market may not be successful and the issuing company may not get the required amount of funds from the new issues. It implies that in the bear market, new issues usually fail to create much impact upon the investors. On the contrary, in the bull market, most of the new issues become successful. So, it may be said that success of the primary market largely depends on the secondary or the share market. The buoyancy of the primary market depends on the effectiveness of the secondary market.

Chart - 18



In the secondary market, securities of the listed companies are traded. Investors put their money in buying good quality shares for a longer term and create wealth. Investors with long-term perspective search for good quality stocks in the share market. Good companies with sound management, issue their shares and debentures for raising funds for expansion of their businesses and afterwards, these securities get listed in the secondary market. So, primary market provides good quality shares to the secondary market. Unless there exists a sound primary market in the financial system, secondary market would not be able to provide quality stocks for the investors. Thus, the primary market is a constant source of securities of good companies to the share market. A flurry of shares of well managed and reputed companies get listed on the secondary market, and the secondary market creates an investment opportunity for the investors. The inflows of good quality of new issues enrich the secondary market. So, the effectiveness of the secondary market largely depends on the success of the primary market. As we have discussed, it may be stated that primary market and secondary market are inter-related and dependent on each other. Neither the primary market nor the secondary market can operate without the help of the other.



2.6.10. Differences between Primary Market and Secondary Market

The main points of distinctions between the new issue market or primary market and the stock market or secondary market are as follows :

Points of Distinctions	New Issues Market (Primary Market)	Stock Market (Secondary Market)
(1) Definitions	New issues market is a highly regulated market for new issue of securities (and follow on issue of securities) of corporate organisations. In this market companies issue equity shares, preference shares and debentures for raising long-term capital.	Stock market is a highly regulated market where listed securities such as shares and debentures of companies are transacted.
(2) Providing Capital	Corporate organisations procure long-term capital by issuing shares and debentures in this market.	Stock market does not provide any fresh capital or additional capital to the companies ; only the existing listed securities are traded in this market.
(3) Nature	New issues market provides fresh capital or additional capital to the corporate sector.	Only there is a trading of existing capital in the stock market.
(4) Securities	New issues market deals with new securities such as equity shares, debentures, etc. of corporate organisations.	Stock market deals with existing securities of the enlisted corporate organisations.
(5) Trading of Securities	Investors subscribe securities of companies directly from the issuing companies.	It deals with trading of securities of companies which are listed on a stock exchange.
(6) Control	There is no central authority to control this market. The SEBI looks after the overall operations of this market.	Trading and other activities of the stock market are strictly controlled by specific rules and regulations framed by the SEBI and its concerned stock exchange.
(7) Areas of Activity	New issues market has no geographical location. Activities of this market is not confined to any particular place.	Stock markets are situated in big cities and in industrial hubs of the country.
(8) Volume of Transactions	The amount of capital raised by the corporate organisations is lower than that of the total amount of transactions in the stock market.	Total volume of transactions is huge in this market.

Points of Distinctions	New Issues Market (Primary Market)	Stock Market (Secondary Market)
(1) Assistance	New issue market assists the entrepreneurs who are willing to raise capital by issuing securities.	It provides an opportunity for investors to sell the existing securities in the market. Good governed companies can create wealth for their shareholders in the long term when the price of shares increase on a sustainable basis.
(2) Economic Benefits	This market helps to grow industries, trade and commerce by providing fresh capital to the entrepreneurs.	Securities of the listed companies are traded regularly in this market. It helps to maintain liquidity in the system.

2.6.11. Factors contributing to the growth of Indian Capital Market

Before independence, Indian capital market was not developed. There was utter lack of capital market and slower mobility of funds. Corporate sector used to have difficulties in raising capital for the market. As a result, industrial activities had suffered. There was urgent need to bring about a healthy capital market in India. The government of India took various measures after independence to establish a healthy capital market. After independence, particularly post-1950, Indian capital market has been growing with a much greater pace. The rapid growth of Indian capital market in post-1950 era are due to the following reasons :

- Legislative measures :** In order to safeguard the interest of investors, the government of India has adopted some legislative measures such as *Companies Act, 1956* (This Companies Act is expanded and the new Companies Act 2013, has been enacted), *Securities Contracts (Regulation) Act, 1956*, *SEBI Act, etc.* The government of India established some regulatory bodies such as *The Securities and Exchange Board of India (SEBI)*, *Insurance Regulatory Development Authority (IRDA)* etc. to regulate the activities in the Indian capital market. These regulatory and legislative measures of the government contributed immensely towards the development of Indian capital market. After adoption of the regulatory and legislative measures, malpractices and irregularities of the capital market activities have reduced to a great extent. It raised up the confidence of the general investors.
- Establishment of financial institutions :** In order to ensure the supply of long-term capital to the industries and to uplift the economic growth of the country, the government of India has established several financial institutions and development banks such as *NABARD, ZIL, ICI, SEBI, SFC, etc.*
- Introduction of online trading system :** Share market operations have been improved greatly with the establishment of National Stock Exchange (NSE). The NSE started computerised online trading system. As a result, the cost of transactions got reduced significantly. Moreover, regulations and malpractices in the traditional system were mostly removed with the evolution of computerised system. It enhanced the confidence of the investors.
- Introduction of strong surveillance system :** Indian capital market has witnessed some misbehaving scams perpetrated by some unscrupulous traders and brokers which damaged the sentiment and sanctity of the capital market. As a result, general investors have lost their confidence on the capital market. In order to prevent such malpractices and irregularities in the activities of the capital market, the SEBI has installed a strong surveillance system. It helps to curb the fraudulent activities in the system.

- (8) **Underwriting activities:** Banks, banking houses, merchant bankers and non-banking financial institutions have started underwriting activities. It helps the corporate organisations to raise fresh capital from the primary market. The acts of underwriters strengthen the efficiency of the capital market.
- (9) **Introduction of derivative trading:** Derivatives are newer instruments in the Indian capital market. Derivatives are the financial instruments which derive their values from their underlying assets such as shares, gold, commodities, etc. Derivatives are used to minimise the portfolio risk. With the introduction of derivative trading in the secondary market, lots of confidence is witnessed among the traders and the liquidity gets enhanced in the system. It helps to strengthen the capital market.
- (10) **Growth of mutual fund business:** Mutual fund business has been growing rapidly in the Indian capital market. It is being popularised among the Indian investors. A large number of people are investing their money in the capital market through the mutual fund route.
- (11) **Establishment of LIC, GIC and UTI:** The depth of the Indian capital market is being witnessed since the establishment of LIC, GIC and UTI. These institutions have been playing a pivotal role in developing the capital market.
- (12) **Participation of commercial banks:** Commercial banks have been participating in the activities of the capital market. They are now offering underwriting services, subscribing shares and debentures and lending to the corporate houses. They are now playing a significant role in the Indian capital market.
- (13) **Synchronisation of money market and capital market activities:** Some lack of co-ordination between the capital market operations and money market operations was there. But the RBI and the SEBI have been striving to integrate the activities of these markets to a great extent. Harmonisation of activities of these markets may help to create a stable capital market in India.

2.6.12. Recent Developments in Indian Capital Market

Before independence, Indian capital market remained dull. General people were reluctant to invest in the securities of the capital market. After independence, the government of India adopted many proactive measures in order to establish a healthy capital market. The government had enacted several Acts and established some regulatory bodies to strengthen the capital market. Various measures were adopted by the government of India.

- (1) **Regulatory Measures:** There are four legislations governing the securities market. These are –
 - (i) The Securities and Exchange Board of India Act, 1956 [SEBI Act] 1956. As per this Act, the SEBI was set up as the apex regulatory body in the Indian capital market.
 - (ii) The Companies Act, 2013. It sets out the code of conduct for the corporate sector.
 - (iii) The Securities Contract (Regulation) Act, 1956. It provides for regulation of transactions in securities through the recognised stock exchanges.
 - (iv) The Depositories Act, 1996. It provides for electronic maintenance and transfer of securities or Demat accounts.

These regulatory and legislative measures prevented the malpractices and fraudulent activities in the securities market to a great extent and they instilled the confidence among the general people in the securities market.

- (2) **Establishment of various financial institutions:** The government of India has set up several financial institutions for providing medium and long-term capital to industries by

various purposes. These financial institutions are IDBI, SIDBI, EXIM Bank, UTI, etc. They have been playing a pivotal role in the Indian capital market.

Nationalisation of commercial banks and insurance sector: Some improvements in the government of India adopted few bold measures such as nationalisation of some commercial banks and the Life Insurance Corporation of India. It helped to strengthen the Indian capital market.

Synchronisation of money market and capital market activities: The Reserve Bank of India and the Securities Exchange Board of India have taken some proactive steps in bringing harmony between the activities of capital market and money market. Harmonisation between these markets strengthens the overall financial system.

Depository services: The government had started the Depositories Act in 1996. As per this Act, two depositories were set up in the country. These are The National Securities Depository Ltd (NSDL) and The Central Depository Services (India) Limited (CDSL). Since the introduction of the depositories, trading in securities has become transparent and convenient.

Introduction of online trading system: Computerised online screen-based and scripted trading system has been introduced by the SEBI. It enhances the confidence among the investors. All trading procedures have become very easy.

Introduction of robust surveillance system: Indian capital market has witnessed some big scams such as Harbans Mehta scam, Kotak Finance scam, etc. perpetrated by some unscrupulous persons. These incidents damaged the sentiment and stability of the Indian capital market. In order to prevent the malpractices and fraudulent activities in the capital market, the market watchdog SEBI has installed a strong surveillance system. Since then, fraudulent activities of the market have reduced to a great extent and the entire market has become healthy and effectively.

Control of speculative transactions: Brokers and big traders involve in too much speculative transactions such as margin trading and unauthorised trading with derivatives. They tempt the general investors to involve in these speculative transactions. The market investors being in lack of knowledge about the stock market involve in these trading and lose their fingers sustaining huge losses. For that reason, the SEBI came out and adopted some policies to check such speculative transactions. The SEBI takes stern action against the brokers and the traders who participate in these unwholesome transactions.

Participation of Foreign Institutional Investors (FIIs): Participation of FIIs in the Indian capital market has been increasing by leaps and bounds. It facilitates to enhance liquidity in the system.

SEBI's awareness programmes: The SEBI has taken an initiative to educate the common people about the capital market. It has set up an "Investor Education and Promotion Fund" for this purpose. It conducts various programmes in colleges, universities and in other institutions for imparting knowledge about the financial market. Very recently the SEBI has started its awareness programme at the school level.

2.6.13. Problems with Indian Capital Market

Indian capital market has been facing some difficulties. The main problems of the Indian capital market are discussed below.

(1) **Apathy of the general public:** There is a lack of inclination among the general people to invest in the capital market. There exists a lack of awareness about investing in capital market among the common people.

(2) **Foreign Institutional Investors' (FIIs) driven market:** Indian capital market is too dependent on foreign capital. Foreign institutional investors (FIIs) invest in Indian securities in

large volume. Indian institutional and retail investment is not encouraging. Foreign investors make huge amount of profits from Indian capital market. It is not at all a healthy sign. They dominate the Indian capital market. It indicates lack of vibrancy of the domestic capital market.

- (3) **Reckless speculation** : Indian capital market witnesses unnecessary huge amount of speculation by the traders. Sometimes retail investors possessing little amount of funds are entangled in reckless speculation and suffer huge amount of losses. This reckless speculation dampens the sentiment of the common investors.
- (4) **Unethical practices of brokers** : Some unscrupulous brokers indulge unethical practices in transacting in capital market. There is an utter lack of transparency, integrity, corporate governance, law and ethics in dealing with securities in the capital market.
- (5) **Liquidity crisis** : Indian capital market is too dependent on foreign funds. When foreign investors siphon off huge amount of their invested funds from the Indian capital market, at that time market faces the crunch of liquidity. Paucity of liquidity creates a lot of problems in the system.
- (6) **Lack of investors' awareness** : Long-term investors are able to create wealth if they invest rationally in shares of good companies. There is a paucity of opportunities in the capital market. Mr. Rakesh Jhunjhunwala, doyen in the Indian stock market, said that "Have correction and be patient, your patience may be tested but your conviction will be rewarded." A disciplined investor is able to create sufficient amount of wealth from the stock market. But small investors of our country do not have much knowledge and passion to invest in the stock market. Most of them think that stock market is the gambling den. But it is not true at all. By adopting disciplined investment strategy, a retail investor can create fair amount of wealth in the long-run.
- (7) **Capital market scams** : Indian capital market witnessed some big scams, such as, Harad Mehta scam, UTI scam, Ketan Parekh scam etc. Due to these scams small investors have lost their money in the stock market. As a result, general investors become discouraged to invest in the stock market. The market watchdog, viz., SEBI has installed surveillance system to monitor the activities of the brokers and large traders to spot the unethical and illicit practices in the market.
- (8) **Insider trading** : Insider trading means dealing in company's shares on the basis of unpublished and confidential information relating to the company in order to earn windfall gains. It is the trading in the shares of a company by persons who are in the management of the company or very close to them on the basis of undisclosed price sensitive information regarding the working of the company in order to earn maximum profits quickly. It is an unethical and illegal practice. Indian capital market witnessed several insider trading instances which damaged the sentiment of the capital market.
- (9) **Prevalence of unhealthy nexus** : Some unhealthy nexus among the companies, intermediaries (brokers, sub-brokers, portfolio consultants, etc.) and some dishonest businessmen exist in the Indian capital market. In order to earn windfall gains from the stock market, they adopt some illegal and unethical measures, such as—price rigging, providing misleading information in the prospectus, illegitimate speculation, meddling in circular trading, etc. These activities dampen the quality of the stock market.
- (10) **Lack of investors' protection** : There definitely exists a regulatory body in Indian capital market. Despite of that it is witnessed that the retail and small investors are duped by some unscrupulous traders, brokers or by the promoters. So, there is an utter lack of investors' protection in the Indian capital market.

lack of depth in the market : Indian stock market suffers from inadequate depth. The Indian stock markets confront with many challenges and hindrances. As a result, liquidity in the stock market activities cannot be attained.

Underdeveloped debenture market : Debenture market sponsors long-term debt to corporate sector. But Indian capital market fails to establish a sound debenture market.

1.4 Reforms in Indian Capital Market

Harad Mehta Scam (1992) in the Indian capital market had shaken the confidence of the general investors and foreign investors on Indian capital market. After this scam, questions have been raised from various corners regarding regulation of Indian stock market. This prompted the government to monitor the confidence of investors and to bring transparency and fairness in the capital market transactions. Several reform measures have been adopted by the central government since late 1990s. These are discussed below :

1. Primary Market Reforms :

The Securities and Exchange Board of India (SEBI) was set up in 1988, as a non-statutory body. It was given the statutory power in 1992 after Harad Mehta scam through the enactment of the SEBI Act, 1992, in the parliament for regulating the capital market in India. It became the main regulatory body and acts as the capital market watchdog.

Basic infrastructure of the primary market has been developed. Several merchant bankers, investment bankers and consulting agencies have been developed.

Activities of the primary market has widened and deepened due to active participation of universal banks, development banks and other financial institutions.

The SEBI adopted some proactive measures such as improved disclosure standards, prudential standards, simplified issue procedures, etc.

Indian capital market was integrated with the international capital market. As a result, a foreign company may raise capital from the foreign market ; it may list its share in the foreign stock exchange ; a foreign company may be listed in the Indian stock exchange, and a foreign company may raise capital from the Indian market.

Foreign companies were allowed to raise funds from the international market by issuing Global Depositary Receipts (GDRs), American Depositary Receipts (ADRs), Foreign Currency Convertible Bonds (FCCBs) and External Commercial Borrowings (ECBs).

Features of flotation of new issue of shares are made easier.

Merchant bankers, Mutual funds, Portfolio consultants, Share transfer agents, Underwriters, Debenture trustees, Custodian of securities and Venture capital funds have been brought under the purview of the SEBI.

All listed companies which issue their shares through initial public offer (IPO) for raising of new money are required to make an offer only in dematerialized (Demat) form.

The SEBI has introduced the the Green shoe option facility in the IPO for stabilizing the post issue price in the market. It takes up the sentiment of retail investors to invest their money in new issues.

2. Secondary Market Reforms :

Several reform measures adopted in the secondary segment of the capital market are as follows :

1. Introduction of online screen-based electronic trading system.

2. Establishment of Over the Counter Exchange of India (OTCEI).

3. The settlement period of securities was shortened. T+2 settlement period was introduced.

- (4) In order to safeguard the interest of the investors, process of dematerialisation of securities through the depository system was introduced.
- (5) Various measures are taken by the SEBI to improve the standards of corporate governance. The SEBI has issued new corporate governance rules for the companies with effect from 1st October, 2014.
- (6) Stock exchanges have undergone some structural changes for providing better services.
- (7) Companies are allowed to buy-back their own shares for capital restructuring.
- (8) Various regulations were passed to prevent insider trading.
- (9) Publication of unaudited quarterly results of listed companies are made compulsory.
- (10) Brokers involved in block deal and bulk deal have to disclose the facts to the concerned stock exchange immediately.

2.7. Financial Derivatives

Financial derivative is the buzz word in the modern financial system. Financial derivatives are those assets or financial instruments whose value is determined from the value of some underlying asset. The underlying assets may be equity, commodity or currency. The derivatives are the most popular financial instruments used for mitigating the portfolio risk. The individual or firm who wishes to mitigate risk can deal with others who are willing to accept the risk for a price. A contract is made when such transactions take place is called the derivative market. These instruments are called 'derivatives', because they derive their values from some underlying instruments and have no intrinsic value of their own. Forwards, futures, options, swaps are commonly used as derivatives.

Features of Derivatives : The salient features of derivatives are as follows :

- (1) It is a modern financial instrument used by the investors for reducing the market risk.
- (2) A Derivative has no intrinsic value of its own. It derives its value from its underlying asset. Underlying assets may be equity, commodity, gold, etc.
- (3) Derivatives are traded globally. These instruments have gained popularity in the financial markets.
- (4) Derivatives are complex and sophisticated financial instruments used for reducing the market risks.
- (5) Value of derivative instrument depends on the value of its underlying assets.
- (6) Derivatives are akin to the insurance. Insurance protects against specific risks, such as fire, flood, accident, etc. Derivatives, on the other hand, takes care of the market risks. Market risks arise due to volatility in interest rates, currency exchange rates, commodity prices and share prices.
- (7) Transaction cost of derivatives is less.
- (8) Derivatives are traded on exchanges.
- (9) Traders can speculate in the market using the derivative instruments.
- (10) It enhances the liquidity in the system.
- (11) Derivative enables the traders to predict the price movement of securities or commodities in the movement of the market.
- (12) It strengthens the depth of the market.
- (13) Forwards, futures, options and swaps are the commonly used derivatives in the financial market.

Participants in the Derivatives Market

Participants in the Derivative market can be broadly classified as :

Hedgers,

Speculators, and

Arbitrageurs.

Hedgers : Hedgers are those who enter into a derivative contract with the objective of minimising the risk. A farmer growing sugar cane faces uncertainty about the price of his product at the time of the harvest. Similarly, a sugar mill requiring sugar cane also faces uncertainty of price of input. Both the farmer and the sugar mill can enter into a forward contract, where the farmer agrees to sell his product when harvested at a predetermined price to the sugar mill. Such a contract will eliminate the risk of price variation for both the parties. The contract is made with the object of hedging against the price risk. Such participants in the derivative markets are known as hedgers.

Speculators : Speculators are those who enter into a derivative contract to make profit by taking the risks. If a speculator has information or analysis which forecasts an upturn in a price, then he can go long on the forward or future market instead of the cash market (or spot market), wait for the price and take a reversing transaction. The use of forward or future contract here gives leverage to the speculator.

Arbitrageurs : An Arbitrageur makes profit from price difference existing in two markets while he is simultaneously operating in two different markets. Arbitrageurs constantly monitor the price of different assets and identify opportunities to make profits that results from pricing of products. The most common example of arbitrage is the price difference that exist in prevailing in different stock markets. For example, if the share price of ITC Ltd. is ₹ 340 in BSE and ₹ 342 in BSE, the arbitrageur will buy at BSE and sell at BSE simultaneously and make a profit of ₹ 2 per share.

12. Roles and Limitations of Financial Derivatives

Functions performed by financial derivatives are discussed below :

- (1) Derivatives are used to reduce, remove and control various types of market risks.
- (2) Derivative reduces the market risk and thereby encourages the investors to stay invested in securities and commodities for long-term period.
- (3) Derivative costs can be reduced to a great extent by using the derivative techniques.
- (4) It is a mechanism used for the price discovery of various financial assets traded in the market.
- (5) It enhances the liquidity in the market.
- (6) It is a mechanism used for hedging market risks.
- (7) It enables the traders to predict the price movements or the movements of the market.
- (8) It plays the role of a catalyst in the development of the stock market.
- (9) It helps to develop a complete financial market in the country.
- (10) It strengthens the depth of the market.

12.1 Role of the Derivative Market :

Derivative is a financial asset which derives its value from some specified underlying asset. The derivatives derive its value from the performance of something else. That 'something else' is often said to be the underlying asset. It may be shares, debentures, tangible commodities, currencies, such as long-term or short-term securities.

derivative does not have any physical existence but it emerges out of a contract between two parties. It does not have any value of its own, but its value, in turn, depends on the value of other assets which are called the underlying assets. As we have already indicated these underlying assets may be shares, debentures, tangible commodities, currencies, short-term or long-term securities, etc. If the underlying asset is a financial asset, the derivative is called financial derivative. On the other hand, if the underlying asset is a commodity, the derivative is called commodity derivative.

Derivative contracts are agreements between the buyers and the sellers for monetary consideration. Derivative contracts can either be over-the-counter (OTC) contracts or exchange-traded contracts. The OTC contracts are between private parties and the terms of the contract are decided by the parties themselves initially. These contracts are highly unregulated and less transparent. For instance, swaps, etc. come under the domain of OTC contracts. The exchange-traded contracts are traded and regulated on derivative exchanges in order to ensure transparency.

● Role and Functions of Derivatives

Derivatives usually perform the following functions:

- (1) **Price discovery of underlying assets:** Price discovery is a method of determining the price of a specific commodity or security through basic supply and demand forces related to the market. Price discovery is the general process used in determining the spot price. These prices are dependent upon market conditions affecting supply and demand. For example, if the demand for a particular commodity is higher than its supply, the price will typically increase and vice versa.

Futures market prices of several commodities and financial assets depend on a continuous flow of information from around the world (in a globalised capital market) and require a high degree of transparency. A myriad range of factors (viz. climatic conditions, political situations, debt default, refugee displacement, pandemic situation etc.) impact supply and demand of assets and hence the current and future prices of the underlying assets (on which the derivative contracts are based). This kind of information and the way people absorb it constantly change the price of a commodity. This process is known as price discovery.

- (2) **A technique of risk management:** Financial derivatives are useful for dealing with various types of risks, particularly the market risk, credit risk, inflation risk, exchange risk, operational risk, liquidity risk etc. The importance of derivatives has been increasing since the institution has been used to hedge against price movements. This financial tool assists in spreading the risk associated with a specific portfolio without requiring selling the portfolio itself. Essential derivatives allow investors to manage their risks and in attaining the desired risk profile more efficiently.

The relationship between derivatives and risk management is relatively simple. Derivatives are seen as the tool that enables banks and other financial institutions to break down risks into smaller elements. From this, the elements can be bought or sold to align with the risk management objectives. So, the original purpose of derivatives was to hedge and spread risks.

- (3) **Lower transaction costs:** Derivative markets entail lower transaction costs. They have good liquidity compared to spot markets. Derivative markets allow short selling of underlying security more easily (short selling means selling of any financial asset without possessing that asset). In fact, the seller can borrow it from a broker at present and can refund the same in the future by buying at a lower price from the market.
- (4) **Market efficiency:** Spot markets for securities probably would be efficient even if there were no derivative markets. A few profitable arbitrage opportunities exist, however, as it is not clear that they are usually efficient. The presence of these opportunities means that the price of some assets temporarily out of line. Investors can earn returns that exceed what the market offers (in the

long-run risk level. There are important linkages between spot and derivative prices. The ease and low cost of transacting in these markets facilitate the arbitrage trading and rapid price adjustments that quickly eradicate these profit opportunities. Society benefits in this process because the prices of underlying goods reflect more accurately the good's true economic values.

- (5) **Crashhocks of financial derivatives:** Mr. Warren Buffett said that "Derivatives are the financial equivalent to mass business destruction."

Following are the limitations of the financial derivatives:

- (1) The financial instruments are meant for hedging the market risks. If it is used for speculative trading, and if possesses huge risks.
- (2) Small investors are tempted to trade in derivative and often lose their money.
- (3) Big traders often use the derivative trading to create panic in the market. Small traders and retail investors become confused and take wrong decisions and lose their money.
- (4) It does not create wealth for the investors.
- (5) It only distract the genuine investment of the investors.

2.3. Forward Contract

A forward contract is a derivative contract where a buyer and a seller make an agreement to exchange a commodity or any instrument for cash at a predetermined future date and at a stipulated price agreed upon today. The agreed upon price is known as forward price. In this contract, the transfer of ownership occurs on the spot but the delivery of the commodity or instrument is made on the future date as specified.

● Features of Forward Contract

Following are the salient features of a forward contract:

- (1) It is a derivative contract between two parties who will exchange a commodity or any instrument at a future date and at a stipulated price and quantity.
- (2) In this contract, forward price is fixed at the time of making the contract but the goods are delivered on a future specified date.
- (3) At the time of making the contract, there is no exchange of money between the parties.
- (4) On the maturity date, this contract is settled.
- (5) Trading of forward contracts on any recognised stock exchange is not permitted.
- (6) Since such forward contracts are mostly private bilateral contracts, they are exposed to a default risk by the counter party.

2.4. Future Contract

Present and future contracts refer to transferable legal agreements between two counterparties to exchange any financial instrument (or even a commodity) at a predesignated price at some fixed future date. These contracts oblige the sellers (called as 'shorts') of a particular asset to deliver the same in specified quantities to the buyers (called as 'longs') at some fixed future date at a contracted price. The contract period varies between 3 to 23 months and the terms of contract cannot be changed during that period. On the delivery date, the settlement price is determined by the market price (or the spot price) which fluctuates constantly due to supply and demand forces. However, prior to the delivery date, the future price could be above or below the spot price.

In the stock market, the stock index futures are traded on the basis of different share price indices (e.g., the stock index futures traded in NSE are Bank Nifty, CNX 100, Nifty Midcap 50, etc.). Again, in commodity futures (say, in respect of gold and silver) are traded in the National Commodity and Derivatives Exchange Ltd. (NCDEX) and Multi-Commodity Exchange (MCX).



• Features of Future Contract

Following are the unique features of the future contract:

- (1) This contract is traded in an exchange.
- (2) Here, all dealings are controlled centrally.
- (3) Future prices are disclosed everyday publicly.
- (4) Only the exchange members can participate in trading with the future contracts.
- (5) Trading takes place on the open call basis.
- (6) $\text{Future price} = \text{Spot price} + \text{Cost of carrying}$

[i.e., storage, insurance, transportation and interest cost]

2.7.5. Differences between Forward and Future Contract

Following are the important distinctions between Forward Contract and Future Contract:

Forward Contract	Future Contract
(1) It is a derivative contract where a buyer and a seller make an agreement to exchange a commodity or any instrument for cash at a predetermined future date and at a stipulated price agreed upon today.	(1) It is a standardized contract which is traded in future at exchange. It provides an assurance to the exchange authority to buy or sell a security, commodity or currency at a predetermined future date at a price agreed upon today.
(2) Here the contract price is not transparent as it is not disclosed publicly.	(2) The contract price is publicly disclosed and hence transparent.
(3) This contract faces the problem of liquidity.	(3) There is no liquidity problem.
(4) The sizes of these contracts are much larger.	(4) Future contracts are comparatively smaller in size.
(5) Each contract is unique in terms of size, expiration date and asset quality.	(5) These contracts are standardised in terms of size, expiration date and the asset quality.
(6) Settlement of the contract is done by delivery of the asset on the expiration date.	(6) Settlement of this contract is done on cash basis.
(7) Forward contracts are traded on the over the counter (OTC) market.	(7) Trading of future contracts is allowed only in organised exchanges.
(8) On the maturity date, the forward contracts are settled.	(8) Future contracts can be settled on or before the maturity date.
(9) It does not require any margin money.	(9) Margin money is needed in future contract.
(10) Profit or loss from a forward contract is realised when the contract matures.	(10) Here, profit or loss is ascertained on a daily basis.

2.7.6. Options

An option is a contractual agreement which confers a right but not the obligation upon the buyer to the holder to buy (in call option) or to sell (in put option) a specified instrument at a predetermined price on or before the specified date in the future. If the option holder exercises the right, the option seller is obliged to deliver the specified instrument at the predetermined price. An option is like an insurance or it is a hedging technique against the adverse price movement of securities, currencies, commodities, etc.

An option contract provides the buyer or holder to buy or sell the underlying asset (such as, currencies, commodities, etc.) at a predetermined price on or before the maturity or expiration date. The holder or buyer enjoys a right but not an obligation to acquire the underlying asset by paying a premium to the seller or the writer of the option. The seller or the writer has to transact in buying or selling if the buyer exercises his option to buy. At the worst case, the holder will not exercise the option if he does not exercise his option but will not be deprived from the huge potential profit in the premium. But the seller or the writer is exposed to unlimited downside risk. Options are classified as (a) call options and (b) put options.

• Features of Options

The unique features of option technique or contract are:

- (1) The option is exercisable only by the option holder or option buyer.
- (2) The option holder has limited liabilities. The maximum loss he would suffer is the premium he has paid to the option seller or the writer.
- (3) Option seller or writer is exposed to a high degree of risk.
- (4) An option holder (or buyer) does not enjoy such rights as enjoyed by a shareholder, such as, voting right, dividend, right shares, etc.
- (5) The price at which the underlying asset can be bought is the 'Strike price' or the 'Exercise price'.
- (6) The date when the option contract will mature is known as 'Exercise Date' or 'Expiration Date' or the 'Date of Maturity'.
- (7) On the basis of maturity, there are two types of options. These are (a) European option—which can be exercised only at the maturity date; and (b) American option—which can be exercised at or before the maturity date.
- (8) In option contract, one certificate is issued in the option holder by the company.
- (9) In this contract, only the writer or seller is obliged to perform the contract if the option holder exercises his option.
- (10) In this contract, the holder of option pays the option seller (or writer) a premium.

• Benefits of Option

Option contract is a very important derivative instrument. It is used as a hedging instrument against market volatility and to control financial risks. Traders also use this technique to earn windfall gains. It provides high degree of leverage with a small premium to expose in much larger amount of underlying instruments. Benefits of option contract are immense. Benefits of option technique are discussed below:

- (1) In using option technique, huge amount of capital gains can be earned.
- (2) In any transaction cost, options are traded in the market.
- (3) Holder of call option knows the maximum amount of loss they can suffer in future and the loss is restricted to the extent of premium paid by him.
- (4) Traders can earn windfall gains through option trading.
- (5) Options are used as hedging instrument against the investors' portfolio.
- (6) It provides an investment avenue to the investors.

• Call and Put Options:

Option provides the buyer a right to acquire the underlying asset on or before the maturity date at a specified price or strike price. The writer or seller is under an obligation to fulfil the contract if the buyer exercises his option. The call option provides the holder the right but not the obligation to buy specified quantity of the underlying assets at a specified price, known as strike price or exercise

price, on or before the maturity date. The holder is not obliged to buy the underlying asset. The holder of an option is exposed to a limited amount of risk. The maximum amount of loss he can suffer is the option premium paid by him.

An example of call option technique is given below:

An investor buys a call option of Infosys Ltd. Share on 1st November, 2013, at the price of ₹ 3,500. The expiry date will be on 30th November, 2013. As per the contract, option premium is fixed at ₹ 100 per share and the number of options are 100. So, he has to pay ₹ 10,000 (₹ 100 × 100) as option premium. If the share price of Infosys Ltd. moves up beyond ₹ 4,400 (strike price + option premium) on or before the maturity date, then the holder will exercise his right and he will earn profit. On the contrary, if the share price of Infosys Ltd. fails to reach ₹ 4,400, then the stock market then the holder will not exercise his option (or right) and he will lose the option premium of ₹ 10,000 he has paid for it. If the share price of Infosys Ltd. moves up to ₹ 4,400 or above before the expiry date in the stock market then the option holder will exercise his right and he will make profit of ₹ 30,000 (₹ 4,400 × 100) - (₹ 4,100 × 100) from this contract.

■ **Put option:** A put option is a right to sell the underlying asset at a predetermined price on or before the maturity date by paying a premium. Here, the buyer is under an obligation to sell the contract and a price or premium is paid for this, which is known as 'put option premium'. It is profitable to exercise a put option only if the market price of the share is dragged down below the strike price.

For example: An investor buys a put option to sell ITC Ltd. share at a price of ₹ 320 by 30th November, 2013. He pays a premium of ₹ 20 per share to buy this option. If the share price of ITC goes down, to say, ₹ 220, the investor will exercise his right to sell these 100 shares at a strike price of ₹ 320 and he will make profit of ₹ 8,000 [(₹ 320 × 100) - (₹ 220 × 100) - (₹ 20 × 100)].

— [Strike price of 100 shares - spot price of 100 shares] - Premium

2.7.7. Differences between Call and Put Option

Both futures and options are the derivative techniques used by the big investors to hedge against the market risks. Traders also use these instruments for short-term speculative trading. However, some differences exist between these derivative techniques. The differences between futures and options are discussed below:

Futures	Options
(1) In the future contracts, both the buyers and the sellers are required to perform the contract.	(1) Here, only the seller (writer) is required to execute the contract.
(2) In a future contract, premium money is not required to be paid by any of the parties.	(2) Here, the buyer has to pay the premium to the seller (writer).
(3) In this contract, a longer maturity period is observed.	(3) Here, the maturity period is comparatively shorter.
(4) The holder of the contract is exposed to a huge downside risk and has the scope for generating high returns.	(4) Here, the loss incurred by the buyer is restricted. The maximum amount of loss he may have to suffer is the premium paid by him.
(5) Here, margin money is required to be paid by both the parties.	(5) Here, only the seller (or writer) has to pay the margin money.
(6) Traders with high risk appetite use this technique for speculative trading.	(6) Usually small traders with low risk appetite use this technique for speculative trading.

2.7.8. Differences between Futures and Options

Both call option and put option are the derivative instruments used by the investors and the traders to hedge against the market risks. Traders also use these instruments for short-term speculative trading. However, some differences exist between these derivative techniques. The differences between futures and options are discussed below:

Points of distinctions	'Call' Option	'Put' Option
Definition	It is that derivative technique which provides a right to buy an underlying asset (i.e., share) at a predetermined price on or before a specified date by paying a premium.	It is that derivative technique which provides a right to sell an underlying asset (i.e., share) at a predetermined price on or before a specified date by paying a premium.
Risk	The risk of call option buyer is restricted but the seller is exposed to an unlimited risk.	The risk of put option buyer is restricted and the seller's risk is unlimited.
Right	It provides a right to buy an underlying asset.	It provides an obligation to sell an underlying asset.
Compulsibility	Call option buyer is not compelled to buy. If he is in a position where he can make profit by exercising his option, then he will buy.	Put option seller is not compelled to sell. If option holder is willing to make profit by applying option, he can exercise his option.
Nature	It represents a long position in a stock, i.e., here option holder remains optimistic in nature.	It represents a short position in a stock, i.e., here the trader remains pessimistic in nature.

2.7.8. Swaps and Credit Derivatives

A swap is a financial instrument which is used as the medium of exchange of one set of future cash flow with another stream of cash flows having different characteristics. Swap is a contractual agreement between the buyers and the sellers to exchange one set of financial obligations for another. Swaps can be divided as— (a) Currency swaps, (b) Interest rate swaps, and (c) Debt-equity swaps.

■ **Currency swaps:** These are the agreements where the currencies are exchanged at a specified exchange rate. In order to minimise the risk of volatility of currency rates, currency swap is used.

■ **Interest rate swaps:** These are the agreements where one party exchanges one stream of interest rate payments for another.

■ **Debt-equity swaps:** In this case an investor buys a debt of a less developed country on the secondary loan market at a discount to acquire equity of this country.

Credit Derivatives:

Credit derivatives are those financial instruments that derive their value from the underlying credit assets. This instrument is used by the hedgers to reduce the credit risks. It is an involved and a complex instrument used by the banks to hedge their risks. Presently it has become popular in public companies, Asset Management Companies (AMCs), Mutual Funds, Hedge Funds, Pension Funds etc. Credit Derivative Swaps (CDS) are the credit instrument which provide guarantee to the loan if the borrower becomes defaulter.

2.7.10. Commodity Market

A commodity market is an organised market where various types of commodities such as gold, silver, copper, zinc, lead and other metals, crude, some agri-products and many more are traded complying with the rules and regulations of the regulator. Forward Market Commission (FMC) is the regulator of the commodity market. In this market, various types of derivative transactions in commodities, such as, forward contract, future contract, option contract etc., are entered by the traders, hedgers, speculators and arbitrageurs. Some Exchange Traded Funds (ETFs) have been brought under the purview of commodity trading.

Commodity market facilitates the hedgers to hedge against risks pertaining to the price fluctuations of commodities. It protects them to restrain their loss due to unpredictable price fluctuations in future. Manufacturers, traders, importers, and exporters are involved in the commodity market to reduce risks due to unforeseen price fluctuations. They use various derivative techniques in the commodity market as a risk management mechanism. Hedging in this market helps reducing or neutralising the speculators in this market involve in speculative trades in order to earn wind-fall gains from the price fluctuations of commodities. But this is a highly risky proposition. Commodity market also acts as a means for hedgers to manage the risks of price volatility of commodities in the global market.

In July 2013, a ₹ 5,000 crore scam had been perpetrated by the promoters of National Spot Exchange Limited (NSDL) in the commodity market. It created a loss-jerk reactions among the participants and they lost their confidence. Afterwards a forensic audit had been conducted to identify the unscrupulous persons involved in this scam. Promoters of the NSDL had been accused and later convicted. The holding patterns of the NSDL have been changed and it continued to operate in the commodity market as Multi Commodity Exchange (MCX). Later on it is proposed to change the name of MCX into Metropolitan Exchange.

In the Budget for 2015-2016, for efficient governance, it was proposed to merge the Forward Market Commission (FMC) with the SEBI. In September, 2015, the FMC was merged with the SEBI. Experts envisage that this merger will bring about some benefits, such as:

- (1) The stock exchanges will become universal exchanges wherein equities, debt instruments, and currencies are traded under the same roof as commodity derivatives.
- (2) The merger will give a boost to the integrity of the commodity markets.
- (3) It will lead to an improvement in the overall efficiency of dealing in the commodity trading.
- (4) It is expected that it will encourage the speculators, hedgers, arbitrageurs to enhance their participation in the commodity market. As a result, liquidity, depth and buoyancy of the market are expected to be improved.
- (5) Afterwards, weather derivatives may be introduced in the commodity market. Farmers and allied agricultural commodity traders are expected to be benefited from it.
- (6) It will be a game changer for the industry and will benefit clients in commodity and equity markets.
- (7) It will improve the overall governance of the commodity markets.
- (8) It is expected that FPIs, banks and Mutual Funds will be allowed to participate in the Indian commodity market. It will be a boon for the markets, industry and for the Indian Financial System as a whole.
- (9) More products will be allowed afterwards in the commodity future. It will strengthen the market and the industry.
- (10) It will facilitate price discovery in the market. Industry as a whole will largely be benefited since competitive price mechanism will be in the offing.

Asymmetric Information

Asymmetric information occurs when one party to a transaction has more or better information than the other. In a market where asymmetric information exists, it rarely happens.

In a business transaction, the flow of information across different segments of a market is not uniform, either it becomes asymmetric in nature, i.e., complete information regarding any business transaction is not available to all the players in a market. For instance, the people who purchase health insurance policies from any insurance company know much more about their own health problems than those available to the insurance company itself. Though the insurance company takes measures to estimate the health conditions of any individual who intends to purchase a health insurance policy, it may not be possible on the part of the insurance company to get full information about the health of the concerned individual unless he/she discloses his/her ailments completely. This leads to the existence of asymmetric information in business transactions.

In many cases getting complete information regarding the quality of any goods or services offered is a costly affair. For example, when any individual buys a second-hand car (or a used car), it is extremely difficult for him/her to judge the true quality of the car (hence, it is observed that such transactions take the help of a 'True Value' appraiser, i.e., the 'Market True Value' cars, to overcome the problem of asymmetric information). In an open market, the value of a used car probably has a lot to do with the quality of that car. But it is not possible for the buyer to get that idea. Such asymmetric information leads to an inefficient operation of a market. The implications of such asymmetric information regarding the quality of a product was first analysed by George Akerlof (1970). We can here use the most popular example of the market for used cars to show the inefficient operation of such market which is characterised by asymmetric information.

Let us assume that this used-car market has been divided into two parts:

Supply of and demand for 'good quality' used cars (often called as 'lemons') and

Supply of and demand for 'bad quality' used cars (also called as 'lemons').

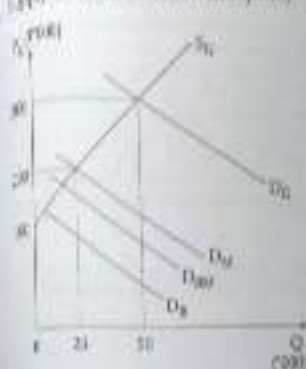


Fig. 16a

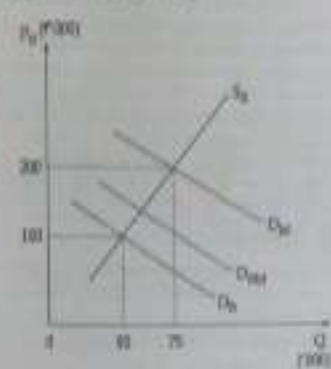


Fig. 16b

In Fig. 16a, we have shown the market for 'good quality' used cars and in Fig. 16b, the market for 'bad quality' used cars has been indicated.

In Fig. 16a, the upward-sloping curve S_1 denotes the supply of 'good quality' used cars while in Fig. 16b, the upward-sloping curve S_2 denotes the supply of 'bad quality' used cars. It is observed that S_1 lies to the left of S_2 .



since the owners of good quality used cars expect higher price (P_G) from the sale of their cars compared to that (P_B) expected by the owners of the bad quality used cars.

Further, in Fig-1(a) the demand schedule for good quality used cars has been denoted by D_G and in Fig-1(b), the demand for bad quality used cars has been denoted by D_B . Here, D_G lies above the D_B since the buyers of good quality cars are willing to pay more than that offered by the buyers of bad quality cars.

At the initial stage, the equilibrium in this used car market shows that equilibrium price of used cars of good quality (P_G^*) is ₹ 3,00,000, and that of used cars of bad quality (P_B^*) is ₹ 1,00,000. In both the markets, the equilibrium quantity (Q_G^* and Q_B^*) of sold cars is 50,000.

In reality the seller of a used car knows much better about the true quality of the used car in comparison with the buyers of these cars. The buyers can discover the quality only after they start using the car after its purchase. In the presence of such asymmetric information, the buyers may think that there is 50-50 chance of such used cars being good or bad quality. So, at the initial stage, with a total size of used car market of 1,00,000, it is observed that 50,000 used cars of good quality are sold and 50,000 used cars of bad quality are sold in the used car market. However, when the buyers do not have exact idea regarding the quality of a used car, they normally view such car as a 'medium quality (M)' used car, i.e., there is an equal chance of getting a 'good quality' and a 'bad quality' used car. In fact, the demand schedule for a 'medium quality' used car would lie in between D_G and D_B and it can be denoted by D_M [Fig-1(a) & (b)]. Naturally, D_M lies below D_G but above D_B . If a car is equally likely to be a good quality used car and a bad quality used car, then a typical buyer would be willing to pay $[0.5 \times ₹ 3,00,000 + 0.5 \times ₹ 1,00,000]$ ₹ 2,00,000 for such used car. This is shown in Fig-1(a) & (b).

But the owners of the used cars of good quality would not be willing to sell their cars at a price of ₹ 2,00,000 per unit (since they expect a price of ₹ 3,00,000). On the contrary, the owners of used cars of bad quality would be happy to sell their cars at a price of ₹ 2,00,000 (since they expect a price of ₹ 1,00,000 per unit). As a result, more bad quality used cars would be sold (75,000) and less of good quality used cars (25,000) would be sold in this used car market [see Fig-1(a) & (b)]. But this transaction in the used car market has a negative externality. When an individual decides to sell a 'bad' car, it affects the perception of the buyer regarding the quality of the average used car in the market. The buyers begin to realise that two-third of the used cars are of low quality, and as a result, their perceived demand schedule for 'bad to medium quality used cars' (D_{BM}) shifts further to the left [Fig-1(a) & (b)]. So the equilibrium quantity of good quality used cars would fall further, and the mix of used cars then shifts heavily towards bad quality cars. In this process, the perceived demand for used cars would further shift to the left until only D_B schedule exists, and only bad quality used cars are sold in this market. Hence, we find that such asymmetric information ultimately leads to a situation where 'bad quality' used cars drive out used cars of 'good quality' from the used car market.

Example 1

Let us assume that 100 persons want to sell their used cars. There are two types of used cars - 'Good quality' (G) and 'Bad quality' (B) used cars. The seller's price and buyer's price for these cars are noted below:

Seller's price of a G-car : ₹ 1,00,000

Seller's price of a B-car : ₹ 50,000

Buyer's price of a G-car : ₹ 1,10,000

Buyer's price of a B-car : ₹ 60,000

Only the owners or the sellers of these cars know the exact quality of these cars. If the buyers believe that 50% of these cars are G-cars then find out the expected price of a used car that the buyers would be willing to pay. Work out the equilibrium outcome of this market.

Solution :

The expected price that a buyer will be ready to pay will be:

$$[0.5 \times ₹ 1,10,000 + 0.5 \times ₹ 60,000] = ₹ 85,000$$

Since the price of good quality used cars will not be sold in the market since the sellers of G-car expect a minimum price of ₹ 1,00,000. Thus, only B-cars will be sold in this market and at final equilibrium the price of used cars will range in between ₹ 50,000 and ₹ 85,000.

Example 2

Consider a market for used cars. Let us assume that there are 100 used cars for sale and it is known that 50% of these used cars are of good quality while the remaining 50% are of bad quality cars. The seller's price and buyer's price for such used cars are given below:

Seller's price of a good quality car : ₹ 1,20,000

Seller's price of a bad quality car : ₹ 40,000

Buyer's price of a good quality car : ₹ 1,30,000

Buyer's price of a bad quality car : ₹ 50,000

If there remains no asymmetry in information then what would be the equilibrium price of good quality (G) used cars and bad quality (B) used cars in this market? If the buyers do not have adequate information regarding the quality of a used car then what would be the price a buyer would be ready to pay for a used car? What would be its impact on the ultimate equilibrium in this market?

Solution :

If there remains no problem of asymmetric information then in the market for used cars, the equilibrium price of a good quality car will range in between ₹ 1,20,000 to ₹ 1,30,000. Similarly, the equilibrium price of bad quality car will lie between ₹ 40,000 to ₹ 50,000.

However, if the buyers do not have adequate information regarding the quality of a used car then the expected value of a used car for any buyer (considering the fact that 50% of the used cars in the market are of good quality and the remaining 50% are of bad quality) will be $[0.5 \times ₹ 1,30,000 + 0.5 \times ₹ 50,000] = ₹ 90,000$.

Hence, the buyer would be ready to pay at most ₹ 90,000 for a used car. However, the owners of used cars of good quality would not be ready to sell their cars at this price since their minimum expected price is ₹ 1,20,000. Hence, only bad quality used cars would be sold in the market at that price.

When any buyer would purchase a used car of bad quality at a price of ₹ 90,000, he/she realises that it is a bad quality car and this situation affects the perception of other buyers. So, ultimately only bad quality used cars would be sold in this market and the equilibrium price of the used car would lie between ₹ 40,000 to ₹ 90,000.

2.6.1. The Problem of adverse selection

Adverse selection refers to a situation where one side of the market cannot observe the 'type' or 'quality' of product on the other side of the market. Hence, it is also called as a 'hidden information' problem.

Let us suppose that an insurance company wants to offer an insurance policy for covering damages of health related problems. The insurance company selects a target population (say, people within the age group of 10-60 years) and estimates the frequency of health hazard for the people in that age group. In case of health insurance, for the people with sound health, the probability of falling sick in any year might be less than 20% but for the high-risk group or old aged group this probability might be more than 20%. But the insurance company may not correctly distinguish between the high-risk

and low-risk people, and hence, it fixes the insurance premium for all people within the age group on an average estimate, say, the probability of falling sick during any year may be taken as 2%.

Now, the people who purchase health insurance policies know much more about their own health conditions or problems than any health insurance company. Thus, there remains asymmetric information between the insurer and insured. Hence, people with sound health or the people in low-risk group may not be willing to purchase the insurance policy. Let the cost of a heart by-pass surgery be given at 'C', and the size of the target group people be 'N'; but the number of surgeries performed per annum be denoted by 'n'. So, the probability of average insurance claim would be $P_2 \times C$. If everyone is insured then the average pay-off would be $P_1 \times C$.

Let us assume that all individuals are risk-neutral and that individuals have better information about their health than the insurers. Let P_1 be the individual's assessment of the probability of their making a claim which is not known to the insurers. So, the individual's expected pay-off is $P_1 \times C$.

The individuals will opt for health insurance if and only if

$$P_1 \times C > P_2 \times C$$

$$\text{or } P_1 > P_2$$

So, in this situation only those people with a greater than average risk will purchase the health insurance policy. As a result, the insurance company incurs a loss, and can raise the insurance premium to cover its loss. In the extreme situation, only those people in high-risk group will purchase such health insurance causing a huge loss to the insurance company. Hence, ultimately the insurance company may have to withdraw such scheme.

• Possible solutions :

Such market failure arising out of adverse selection can be solved in the following ways :

- Government intervention :** The government may intervene in the health insurance market by providing health insurance facilities to poor and aged people at an affordable cost. For instance, the government of India has introduced 'Ayushman Bharat' as an universal health insurance scheme for benefiting the common people of the country.
- Introduction group health insurance scheme :** The insurance companies may introduce group health insurance schemes for a group of employees in any organisation where all the employees must participate in that scheme.

2.8.2. Problem of moral hazard

The moral hazard refers to a situation where one side of the market cannot observe the actions of the other side of the market. So, this problem is also called as the problem of 'hidden action'. Such moral hazard takes place when the persons to be insured can affect the probability of an event that raises the insurance claim.

For instance, if any person has full insurance coverage for the probable loss arising out of car accident then his tendency towards reckless driving may increase after being insured through such a policy. In fact, the insurance company cannot monitor the driving habits of an individual. This, in turn, raises the probability of an accident and the insurance company may find its payments (for claim settlements) to be larger than expected value. In view of such moral hazards, the insurance companies may be forced to raise their insurance premiums, and ultimately may withdraw such non-renewable schemes.

Such problems of moral hazards also alter the ability of markets to allocate resources in an efficient manner. For instance, the insurance premium for 'car accident' insurance does not vary with the number of kilometers driven. Let us suppose that the average cost of driving a car be ₹ 10 per km (which includes ₹ 2 for insurance premium) and at that price the demand for automobile driving be

1000 cars per week. Now, if there is a full accident coverage through car insurance, the average cost of driving a car would come down to ₹ 8 per km. As a result, the demand for automobile driving may increase to 1500 cars per week leading to inefficient allocation of money resources available in a country.

2.8.3. Financial crisis

In a globalised capital market any fluctuation on the one end gets quickly transmitted to the other end of the globe. We are well aware of the global financial crisis of 2007-08 which mainly affected US and other European markets. In the summer of 2007 many leading banks in the US and Europe were hit by a collapse in the value of mortgage-backed securities. It originated from the bubble in the mortgage market in US. Traditionally, banks lent money to homeowners for their mortgage and retained the risk of default, called credit risk. Due to financial innovations, banks can now sell rights to the mortgage payments and related credit risk to investors, through a process called securitization. The mortgage payments purchase are called **Mortgage Backed Securities (MBS)** and **Collateralized Debt Obligations (CDO)**. This process of securitization of a mortgage-backed asset has been shown in Chart 19.

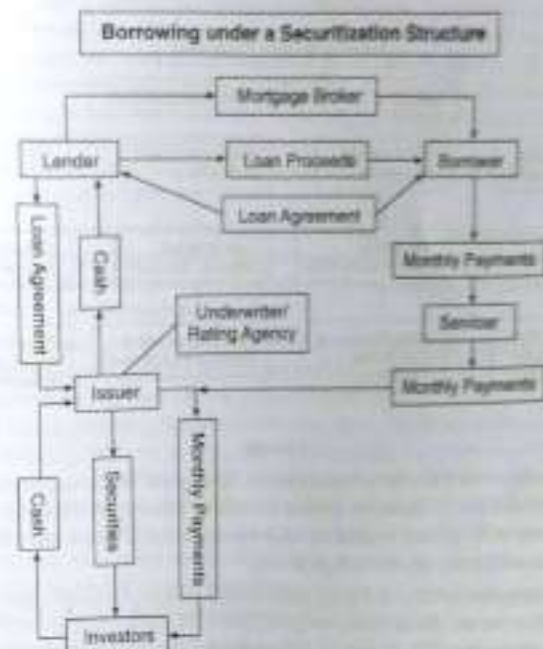


Chart-19

High ratings of these MBS also encouraged the flow of investors' funds into these securities, helping finance the housing boom. The reliance on ratings by these agencies and the intertwined nature of how ratings justified investment led many investors to treat these securitized products (some based on subprime mortgages) as equivalent to higher quality securities. Some government sponsored



enterprise (e.g. Baruch Man and Freddie Mac also invested in these MBS to act to encourage the flow of credit to the middle-income and low-income borrowers for enabling them to purchase houses. There was a political motivation behind it. In addition, tax concessions allowed by the government also led to a boost to this process.

In addition, a burst in the "dot-com bubble" (or sometimes called as the "IT bubble") which gradually developed during 1995-2001 in US and European markets with a speculative increase in the stock prices of some IT companies occurred during 2001 with a sudden crash in the market price of these stocks. Hence, investors who suffered a huge loss in IT stocks wanted to relocate their investments in the housing sector. Some foreign investors were also interested in investing their fund in the housing sector of US. These developments also led to a housing bubble in US (shown in Chart 20). A bubble occurs when speculators note the fast increase in value and decide to buy in anticipation of further rise, rather than because the shares are undervalued. Typically many companies that become greatly overvalued. When the bubble "bursts," the share prices fall dramatically, and many companies go out of business.



Chart 20

For the two decades until 2001, the national median house price in US went up and down, but it remained between 2.9 and 3.1 times the median household income. By 2001, however, the ratio of house prices to income hit 4.0, and by 2006 the ratio was 4.6. But still the people found investment in house property as a lucrative option for high return.

A culture of consumerism in US is also responsible for this bubble. Americans spent \$850 billion per year more than they earned. Household debt grew from \$ 650 billion in 1974 to \$14 trillion in 2006, with the total doubling since 2001. During 2008, the average US household owned 13 credit cards and household debt grew from 66.1 per cent of GDP to 99.9 per cent of GDP during 1997-2007 in US. The banks and financial institutions were engaged in sub-prime lending. Subprime lending is the practice of making loans to borrowers who do not qualify for market interest rates owing to various risk factors, such as lower income level, size of the down payment made, credit history, and employment status.

US interest rates that provided during 2001-06 were very lucrative to the banks. Allowing them to take on more debt, improve the terms of their business and expand its volume. The Federal Reserve indicated that the average difference in mortgage interest rates between subprime and prime mortgages (the "subprime markup" or "risk premium") declined from 2.8 percentage points (280 basis points) in 2001, to 1.3 percentage points in 2007. In other words, the risk required by lenders to offer a subprime loan declined.

The easy credit combined with the assumption that housing prices would continue to appreciate encouraged many subprime borrowers to obtain Adjustable Rate Mortgages (ARMs) they could refinance after the initial incentive period. It is important to note that an interest-only adjustable rate mortgage (ARM) allows the borrower to pay just the interest (not principal) during an initial period of time.

In addition to considering higher-risk borrowers, lenders (via the financial institutions) had offered increasingly high-risk loan options and incentives. These high-risk loans included the "No Income, No Assets" loans, sometimes referred to as Ninja Loans. Speculation in real estate sector was another contributing factor to this end. During 2006, 22% of homes purchased (1.67 million units) in US were for investment purposes, with an additional 14% (1.07 million units) purchased as vacation homes. The subprime borrowing was a major contributor to an increase in home ownership rate and investment in housing in US. The overall US home ownership rate increased from 64% in 1994 when it was since 1980) to a peak in 2004 with an all-time high of 69.2%. This soaring demand led to a housing price increases and consumer spending. It was observed that between 1997-2006, home prices in US increased by 126%.

However, excessive construction of houses during the boom period eventually led to a surplus of houses, causing house prices to decline, during the beginning of the summer of 2006 in US. Further, subsequent rise in interest rates and poor repaying capability of the households led to mortgage delinquency and foreclosure.

Foreclosure is the legal and professional proceeding in which a lender obtains a court-ordered repossession of a mortgagor's equitable right of redemption. Depending on the type of foreclosure, the sale of the mortgaged asset may be administered by the courts (judicial foreclosure) or by an appointed trustee (statutory foreclosure). Proceeds from the sale are used to satisfy the claims of the mortgagee primarily, with any excess going to the mortgagor. Anyone may bid on properties sold at a foreclosure sale. As a practical matter, however, most properties are acquired by the lender, either the amount owed on the foreclosed loan. Usually a lender obtains a security interest from a borrower who mortgages or pledges an asset like a house to secure the loan. If the borrower defaults on more than a particular period and the lender tries to repossess the property, then the lender seeks a court order to foreclose the equitable right of redemption. If the borrower is late in monthly installment payment for more than 60 days than that is considered as delinquency.

As the markets increased the gravity of the financial crisis with helplessness on the part of the lending banks and the investors who invested in the MBS (As shown in Chart 21). Several renowned investment firms (e.g. Lehman Brothers, Washington Mutual) failed in US and immediately affected the global financial markets.



undisciplined and overly optimistic with funds. In a similar fashion, these banks and financial institutions can make risky, high-involvement loans to borrowing spenders if the loans are repaid or recovered in due time and even if some borrower spends the funds and if the loans are compensated by the deposit insurance scheme (funded by the deposits of the savers). These banks will walk away with substantial profits. However, if such risky loans are unchecked without proper monitoring then eventually the cumulative losses on such loans begin to mount, and the value of the loans (on the asset side of the balance sheet) falls relative to liabilities, thereby driving down the net worth (equity) of banks and other financial institutions. Alternatively speaking, the assets of the banks become non-performing in nature. With growing non-performing assets and reduced capital base, there will be deleveraging in these banking institutions, i.e. these financial institutions are expected to cut back on their lending to borrowing spenders.

Now, from the view point of the lender-savers, the banks with lower capital base will have non-performing assets are considered to be more risky and as a result, lender-savers and other potential lenders will try to pull out their funds from these banks or financial institutions. This in turn will reduce the loanable funds available with these banking institutions. This may result in even loans to fund productive investments and a credit freeze. Hence, ultimately the lending banks turn into a lending crisis.

In this paralyzing situation, the evidence of financial frictions will increase. This is because of the fact that the banking and financial institutions stop collecting necessary information regarding the borrower-spenders while lending to them. This will limit the capacity of the financial system to address the problems of asymmetric information and the resultant problems of adverse selection and moral hazard. All these incidents would cause a contraction of economic activity near the loan because savers and the borrower-spenders would not be able to fund their productive investment opportunities.

- (b) **Asset price bubble and bust:** Financial crisis can also be explained in terms of an abnormal increase in the prices of some financial assets and real assets in excess of their fundamental economic values (i.e. their value based on realistic expectations of the future income streams from these assets). This abnormal increase of asset prices above their fundamental economic value is considered as asset-price bubble. The 'dot-com bubble' or the 'IT-bubble' (the abnormal increase in the equity shares of IT companies) during late 1990s in US and the 'housing price bubble' (the abnormal increase in the prices of houses owned out of the mortgage-based housing properties in US during 2000-2004) are the examples of such asset-price bubbles. These asset-price bubbles are often driven by credit boom where these credits are used to purchase these assets.

As the asset-price bubble ultimately bursts with an egress of their inflated price with their fundamental economic values, then the prices of stocks and real assets will fall and, hence, saving companies (i.e. the issuers of the mortgage-based securities) experience a fall in their net worth (i.e. the difference between their assets and liabilities) causing a fall in the value of the company. They can pledge, how to replenish that loss, the managers of these companies who have 'inside the game' (i.e. who do not have significant stake in the shares of the company) may decide to make more risky investments and it reflects a moral hazard. As a result, the banking and financial institutions make their lending standards more strict for borrower-spenders and money contracts.

Further, this asset-price bust also reduces the value of assets of the banks and financial institutions leading to a fall in the market value of these institutions. The net worth of these banking institutions also declines and their balance sheets reflect this deterioration. We have already shown that this will lead to deleveraging on the part of these banking institutions. This will badly affect the business firms that in the economy.

C. Kindleberger (2005), in his book 'Manias, Panics, and Crashes' (5th ed., New York: Wiley) showed how the history of capitalism is marked with episodes during which asset markets are



driven by a speculative fever that pushes prices to levels unrelated to fundamental economic conditions. The question is: What happened in the US economy between July 2000 and July 2007? We have seen an increase of 30% in the value of stocks. Let us put it differently, in July 2000 US stock capitalization was US\$11.5 trillion and one year later, it was US\$13.5 trillion. Thus, the question is: What happened in the US economy to make it possible that US\$2.5 trillion was added to the value of US corporations in just one year? During the same year GDP of USA increased by only 5% (to 600 billion). Thus with the burst of asset-price bubble the stock prices increased by 30%, destroying \$3.5 trillion of value during July 2007 to July 2008.

fundamental like productivity growth increased at their normal rate. The only remarkable increase in asset-price bubble is that there was excessive optimism about the future of the US economy. Investors were caught by a wave of collective madness that made them believe that the US was on a new and permanent growth path for the indefinite future. Such beliefs or speculative optimism can be found in almost all bubbles in history. Investors finally realized that there had been an excessive optimism and the wave turned into one of excessive pessimism.

(c) **Knowing uncertainty:** During the financial crisis of 2007-08 the biggest bank failure in US history occurred when Washington Mutual, with US\$307 billion in assets, closed its doors. The Federal Deposit Insurance Corporation (FDIC) closed 465 failed banks during 2008-12 in USA. Such bank failures in massive scale create more uncertainty in the financial market and deepen the crisis. We can briefly point out the basic reasons for such bank failures.

While commercial banks were increasingly getting involved in financial markets and thus taking more activities that were reserved to investment banks, the opposite occurred with investment banks in USA. The latter increasingly behaved like banks, i.e. they borrowed short and lent long, thereby moving into the business of credit creation. Let us give an example: investment banks (e.g. Lehman Brothers) moved into the business of lending money to hedge funds and accepted stocks or other securities as collateral. They then went on and lent that collateral to others so as to make more money. Thus, investment banks had become banks in the sense that they were making credit. In the process they created an unbalanced maturity structure of assets and liabilities. Their assets were long-term and illiquid while their liabilities had a very short maturity. This mismatch in the asset-liability position made them more vulnerable to the fall in the asset price in the financial market and ultimately caused a bank failure.

Stage 2: Banking Crisis

Several financial analysts are of the opinion that the second stage of a financial crisis in an economy is characterized by a crisis in the banking sector. At this stage several financial institutions are caught in a serious situation and their balance sheets show a negative net worth. As a result, they become insolvent and cannot meet their financial obligations, i.e. they become incapable of paying their depositors and other creditors.

The type of crisis can make some banking institutions financially unstable and they go out of business. Such bank failures have a contagion effect and can create a panic among the depositors leading to a bank run. As a result, several banking institutions may face sudden increase in demand for demand deposits which these banks might fail to meet. In this situation, several banks may fail simultaneously. In fact, the source of such contagion effect is again that asymmetric information since the common perception would be anxious regarding the safety of their deposits with any bank particularly in a situation where the insurance guarantee can ensure only a part of the total deposit amount in case of bank failure. However, these depositors do not have any idea regarding the risk profile of the investment portfolio of the bank. Hence, quick expansion of such panic among the small depositors and asymmetric information can lead to multiple failures of both good (with better quality of credit portfolio) and bad banks (with poor quality of credit portfolio). In this crisis-stricken situation, some banks may sell their assets at a discount. The market value of the equity shares of these banks are declining causing a quick deterioration of the market value of these banks. So we get a full-blown bank panic.



If fewer banking institutions operate in the economy during this crisis period, the creditors of the borrower-spenders find shortage of credit and it may so happen that while taking loan from any banking institution they would deliberately misrepresent the economic viability of their project and lending banks may not also have adequate information regarding the credit-worthiness of these borrowers. This situation increases the possibilities of adverse selection and moral hazard in the financial market. It worsens the conditions of lending contracts of the banks and increases the exposure of non-performing assets. If the banking institutions as a whole reduce their credit then the business firms which intend to undertake productive investment would suffer from lack of investment funds and economic activities would be reduced in the economy. Historically such bank panic has been seen in several countries during 19th and 20th centuries [For instance in 1907, nearly 500 banks failed between 1913 and 1934 before the establishment of RBI; a large number of banks failed in US during 1819-1913 and even during the financial crisis of 2007-2008, the biggest bank failure in US is noticed when Washington Mutual, with USD 307 billion in assets, closed its doors].

However, if the government of a country and the monetary authority can take proper steps to overcome the crisis in the banking sector through the provision of budgetary support to the weak banks, merger of the weak banks with stronger banks, restructure the assets of the banks through the establishment of asset restructuring companies then the uncertainties in the financial market can be minimised. Thus, financial frictions get reduced and gradually the financial crisis may subside. The stock value will recover and the economy may recover from this crisis.

Stage-3: Debt deflation

The recessionary condition in the economy or the economic downturn can lead to a sharp fall in the price level and in that case the recovery process gets a setback. At this stage, such sharp monetary fall in the price level causes increased burden of indebtedness and, hence, further deflationary spiral, net worth of the business enterprises. This situation is termed as **debt deflation**. In fact, it is known that in some economically advanced countries characterised normally by a moderate inflation, pressure, the interest obligations related to debt contracts are typically long-term in nature (say 10 years or 15 years). These debt obligations (in terms of the interest payments at a fixed rate) are due in nominal terms. Thus, under assumption of a steep upward price fall in the price level the real value of the liabilities of the borrowing firms would increase without a corresponding increase in the value of the assets of these firms. As a result, the difference between assets and liabilities in real terms, i.e., the real value of the net worth of the borrowing firms would decline.

For example, let us consider that in 2019, a business enterprise possesses assets worth ₹ 1000 crore (at 2019 prices) and the long-term liabilities of this enterprise amount to ₹ 500 crore; this results in a net worth of ₹ 500 crore for that enterprise. Now, if the price level declines by 5% in 2020 then the value of the liabilities of that enterprise (at 2019 prices) would become ₹ 475 crore. However, the net value of the assets would remain unchanged at ₹ 1000 crore (at 2019 prices). So, the real value of the net worth of this enterprise would decline to ₹ 525 crore.

It is important to note that such debt deflation can intensify the problem of adverse selection or moral hazard. We know that adverse selection in financial markets occurs when the poorer borrowers who are the most likely to produce an undesirable (adverse) outcome, i.e., the bad risk, are the ones who most actively seek out a loan and are thus most likely to be selected. And such adverse selection implies that the loans are more likely to result in bad credit risks, the lender may decide not to make any loans even though good credit risks exist in the financial market. In similar fashion, adverse hazard in financial markets is considered as the risk (hazard) that the borrower might undertake in order to free select an undesirable (financial) from the lender's point of view. Such risky ventures undertaken by the borrowers make it less likely that the loan will be paid back. So, lenders may decide that they would rather stop from making a loan. Thus, lending and economic activities

will decline for a long time. The most significant financial crisis that depressed debt deflation was the Great Depression of late 1920s.

SEBI as the regulator of capital market

The Securities and Exchange Board of India (SEBI) was set up on April 12, 1988, by the government through an administrative order for governing various aspects of the capital market. The Indian Stock Market was involved in 1992, which destabilised the entire securities market and it led to a crisis of investors' confidence in the securities market. At that time, the government realised that there must be a statutory regulatory body for governing the entire capital market and for bringing fairness and transparency in capital market activities. In June 12, 1992, the government of India passed the Securities and Exchange Board of India (SEBI) Act in the parliament. Thus, the SEBI became the statutory quasi-judicial and the apex regulatory body of the Indian capital market.

The main objective of the SEBI is mentioned in the preamble of the SEBI Act, 1992, as "... to protect the interest of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental thereto".

Section 3 of the Securities and Exchange Board of India (SEBI) Act, 1992, states the constitution of the governing council of the SEBI. It comprises of 6 members. The structure of the governing council is as below:

1. A chairperson,
 2. Two officials appointed by the central government who are the experts in the field of finance and law,
 3. One member nominated by the Reserve Bank of India,
 4. Two members nominated by the central government who possess the adequate knowledge and experience relating to the securities market.
- SEBI has the following operational departments for its effective functioning:
1. Department of primary market — It looks after the operations of the primary market. It also issues policies regarding new issue of securities.
 2. Department of secondary market — It controls the activities of the secondary market and issues policies for governing the secondary market.
 3. Legal department.
 4. Research and institutional department.
 5. Volatile department and department for distribution management.

16.1 Objectives of SEBI

The Securities and Exchange Board of India (SEBI) got statutory powers after the SEBI Act was passed by the Parliament in 1992, the year in which the ₹ 5000 crore Harshad Mehta securities scam of Indian Stock Markets. The SEBI was established as an apex regulatory body of the Indian capital market to govern the activities, prevent the malpractices, protect the interest of the general public and accentuate the growth of the Indian capital market. Its objectives are discussed below:

1. **Regulating the capital market:** The SEBI acts as a market watchdog. The prime objective of formation of the SEBI is to regulate the entire capital market. It frames rules and regulations for the functioning of the capital market. It strictly regulates the activities of the capital market.
2. **Protecting the investors' interest:** Sometimes general investors are duped by some unscrupulous brokers, sub-brokers, speculators, etc. It takes safeguards of the retail investors and they become very much reluctant about investing their money in the capital market. As a



result, the capital market could not prosper. So protecting the interest of the investors became an important issue. The SEBI was formed to safeguard the interest of the general investors.

- (3) **Creating a fair image of the stock market :** The SEBI has installed a strong investigation unit to spot the malpractices indulged by unscrupulous persons. It always remains vigilant and watchful. It spots the malpractices and takes the punitive measures against those transgressors. In this way, it creates a fair image of the stock market.
- (4) **Controlling the Mutual Funds :** Mutual fund houses get the affiliation and registration from the SEBI. The SEBI controls the mutual fund houses. It framed various rules and regulations for the Asset Management Companies (AMCs). The AMCs are to adhere to these rules and regulations. The SEBI takes proactive measures so that the mutual funds are spread across the country.
- (5) **Preventing fraudulent and illicit activities :** The SEBI always remains vigilant to spot the unethical activities perpetrated by some unscrupulous functionaries. If it detects unethical practices, it takes punitive measures against such dishonest persons and strives to prevent those unethical practices.
- (6) **Protecting the investors :** The SEBI takes proactive measures so that the general investor's interest can be protected. By protecting the small investors' interests, the SEBI tries to build confidence in the minds of the general investors about the stock markets.
- (7) **Promoting investors' education :** The SEBI tries to educate the general investors about the stock markets. It promotes various investors' awareness programmes for installing confidence in the minds of the general investors.
- (8) **Regulating the collective investment schemes :** It frames rules and regulations to control the collective investment schemes. These investors schemes sometimes deceive the small investors. The SEBI takes necessary proactive measures to regulate the collective investment schemes.
- (9) **Redressing the investors' grievances :** Sometimes investors are cheated by unscrupulous persons in the capital market. Investors can make formal complaints to the SEBI. On the basis of their complaints, the SEBI investigates the matter and takes punitive measures against the offender and arranges for investors' compensation.
- (10) **Conducting research work :** The SEBI always conducts research work relating to the stock market in order to invest new financial instruments for strengthening the overall stock market, and for encouraging the general investors to take part in the activities of the capital market.
- (11) **Inspecting the functions of the stock exchanges :** The SEBI continuously inspects the working of the stock exchanges. It also inspects the books of accounts of the stock exchanges. It tries to ensure smooth operations of the stock markets.
- (12) **Regulating the working of brokers, sub-brokers, transfer agents, portfolio managers, etc. :** The SEBI formulates code of conduct for the functionaries such as brokers, sub-brokers, portfolio consultants, etc. The functionaries must abide by the rules and regulations. The SEBI keeps a vigil on their activities so that any fraudulent activities can be detected and punished.
- (13) **Preventing insider trading in securities :** The SEBI bans the insider trading in securities. It issues stringent norms for the board of directors, brokers, sub-brokers so that insider trading in securities can be prevented.
- (14) **Cancelling the certificate of registration :** The SEBI takes punitive measures against the brokers, sub-brokers or the depository participants if they are convicted for committing fraudulent activities. The SEBI may cancel the registration certificate of these participants if they are convicted for serious charges.
- (15) **Regulating the merchant bankers :** Merchant bank is a SEBI-registered institution which engages itself in the management of new issues of the corporate organisations, prepares projects

for taking up new ventures and renders advice to the management of companies regarding technical, financial and organisational matters. The SEBI regulates and controls the activities of the merchant bankers. The SEBI frames various policies, rules and regulations for the merchant bankers.

3.1.2. Functions of SEBI

As the capital market regulator, the Securities and Exchange Board of India (SEBI) plays a pivotal role in the development of a healthy capital market in India. The main functions of the SEBI are

- (1) **Regulating the stock market :** The prime function of the market watchdog SEBI is to regulate the stock market. As the apex regulatory body, it formulates various rules and regulations to be abide by the functionaries. It tries to prevent the unethical practices committed by some dishonest people and puts impetus on establishing well regulated stock markets.
- (2) **Registration function :** The SEBI regulates and registers the functionaries such as brokers, sub-brokers, custodians, foreign institutional investors, portfolio consultants, etc. It frames rules and regulations for these functionaries.
- (3) **Acting as a watchdog :** The SEBI is considered as the capital market watchdog. It always remains very watchful over the activities of the functionaries and the companies whose shares are listed in the primary market and traded in the secondary market.
- (4) **Providing a healthy capital market :** The SEBI always takes proactive measures to develop a healthy capital market. Higher economic growth cannot be attained unless there exists a healthy capital market in the country. The SEBI being the apex regulatory body of the capital market, always tries to build a healthy capital market in the country.
- (5) **Regulating the functionaries :** Functionaries in the capital market (i.e., brokers, sub-brokers, etc.) play an important role for the development of the capital market. Sometimes they adopt unethical practices to earn windfall gains by depriving the general investors. So, a strict control over the activities of such functionaries is much coveted. In order to regulate them, the SEBI issues code of conduct for the functionaries and ensures their ethical practices in the capital market.
- (6) **Addressing investors' grievances :** Investors make their complaints to the SEBI regarding the unethical practices of the functionaries. On the basis of the investors' complaints, the SEBI takes quick actions against these fraudsters and redress the matter. Thus, the SEBI tries to secure the confidence of the general investors.
- (7) **Rendering professional advice :** The SEBI appoints professionals to look after the activities of the capital market. These professionals possess a huge knowledge about the finance markets. They render valuable advice to the functionaries for ensuring smooth operations of the securities in the capital market.
- (8) **Creating awareness among the investors :** Through press release and by conducting various awareness programmes, the SEBI tries to create awareness about the financial market among the general investors. Recently it started financial market awareness programmes at the school level.
- (9) **Helping the corporate sector :** The SEBI always strives to bring about sound financial sectors in the country. Corporate sector consistently needs long-term capital for their businesses. A healthy capital market ensures a continuous flow of capital to the industries. In this way, the corporate sector is greatly benefited.
- (10) **Promoting balanced development of securities market :** India witnesses a lopsided development of securities market. Indian securities market is mostly urban oriented. Rural people's participation in the securities market remains grossly inadequate. In order to remove



this unbalanced growth of securities market and to ensure more participation in the securities market, the SEBI is constantly searching out ways with great endeavour.

2.10.3. SEBI & Investors' Protection

The Securities and Exchange Board of India Act, 1992 (the SEBI Act) was amended in the years 1995, 1999 and 2002 to meet the requirements of changing needs of the securities market and responding to the development in the securities market. The Primary function of Securities and Exchange Board of India (SEBI) under the SEBI Act, 1992 is the protection of the investors' interest and the healthy development of Indian financial markets.

The SEBI has introduced several rules and regulations to protect the interests of investors through proper education and guidance as regards their investment in securities. For this, SEBI has made rules and regulation to be followed by the financial intermediaries such as brokers, trading members, clearing members etc.

The SEBI looks after the complaints received from investors for fair settlement. It also issues booklets with an aim (i) to guide and protect the small investors, and (ii) to regulate and control the business on stock exchanges and other security markets. For this, SEBI keeps supervising the brokers. Registration of brokers and sub-brokers is made compulsory and they are expected to follow certain rules and regulations. To bring awareness among investors and to protect them from possible frauds in capital markets, the SEBI plans to seek additional funds from the government for strengthening its DUEP (Investor Protection and Education Fund) programme.

The SEBI has identified empowerment of investors, strengthening of enforcement and supervisory framework and capacity building as among its core focus areas in recent years. With regard to various investor protection and education initiatives estimated to be nearly ₹ 55 crore in 2013-15, the SEBI has taken this issue seriously. Investor Protection and Education Fund (IPEF), set up by SEBI, had a corpus of ₹ 38 crore at the end of January 2014. The SEBI is working hard to ensure that the savings of small investors are not compromised following the debt fund scam that have shaken investors' confidence across the country in recent past.

● Role/Contribution of SEBI towards Investors' Protection

SEBI has a definite role to play in investors' protection in the stock market particularly in the era of financial globalisation. The following points would illustrate the role of SEBI in this respect:

- (1) **Issue of guidelines:** The SEBI has issued guidelines to companies (bringing new issues in the market), mutual funds, portfolio managers, merchant bankers, underwriters, lead managers, etc. so as to align their activities in terms of investors' protection. These guidelines are to bring transparency in their operations and also for avoiding exploitation of investors in one way or the other. The SEBI has introduced a code of advertisement for public issues to ensure fair and truthful disclosures. In order to reduce the cost of issue, the underwriting is made optional in certain terms. These steps are also for the protection of investors. SEBI keeps a vigilant watch on all intermediaries and see that they follow the guidelines in the right way. It also takes penal actions when the guidelines are not followed. These steps give protection to investors.
- (2) **Advertisement in public interest:** The SEBI issues advertisements in public interest to enlighten the investors on the basic features of various instruments and minimum precautions they should take before choosing an investment. The SEBI decides to create awareness among investors about their rights and possible remedies arising out of the troubles of transactions in the stock market. It has published many booklets for the information and guidance to investors.
- (3) **Dealing with complaints of investors:** The investors can make complaints to SEBI if they face problems relating to their investment in financial assets. The SEBI receives thousands

and complaints relating to non-receipt of refund orders, allotment issues, non-receipt of dividend or interest and delays in the transfer of shares and debentures.

The SEBI is making efforts to solve such complaints through appropriate measures. The SEBI is also to solve the complaints of investors and wants to protect their interests. It is committed to cooperate with various consumers' redressal forum in this regard. Although a large number of complaints reaching SEBI are being addressed, still a large number of complaints remain unaddressed.

Educating the investors: The SEBI is aware that investors' education (i.e. financial literacy) is important for their own protection. It encourages the formation of investors' associations and disseminate information through newsletters. More than nine such associations are registered with SEBI. The SEBI is bringing out two monthly publications for the investors. These are: (a) SEBI-Market Review, and (b) SEBI Newsletter. These publications are for the investors' guidance and protection of investors.

Surveys on investors: The SEBI has also conducted surveys in respect of investment opportunities for the benefit of small investors. The findings of the surveys are given wide publicity so as to provide proper guidance to investors regarding their investment decisions.

Production of 'stock invest': The SEBI has introduced 'stock invest' as a new mechanism for investors while submitting application for shares. This new mechanism, introduced through the co-operation of commercial banks (i.e. the bankers to the issue), gives protection to investors as they get interest on the application money till the allotment of shares.

Disclosures by companies: The SEBI has introduced norms for disclosure of half yearly financial results of companies. It has also revised the format of prospectus to provide more information to investors. It also insists that every share application form is accompanied by an audited prospectus. The provisions relating to disclosure are for the information and protection of small/average investors.

Code regarding takeovers: The SEBI has now issued code regarding takeovers of companies, mergers and amalgamations. It has introduced regulations governing substantial acquisition of shares and takeovers and lays down the conditions under which disclosures and mandatory public offers have to be made to the shareholders. Here, the purpose is to protect the interests of investors even when they are not directly party to such takeovers.

Investors' protection measures by SEBI: Section 14(2) of the SEBI Act contains measures available with SEBI to implement the legislated design of investors' protection. The measures available with SEBI include the following:

- (i) Regulating the business in Stock Exchanges and in any other securities markets;
- (ii) Registering and regulating the working of intermediaries like stock brokers, sub-brokers, share transfer agents, bankers to an issue, trustees to trust deeds, registrars to an issue, merchant bankers, underwriters, portfolio managers, investment advisers etc. associated with securities market;
- (iii) Registering and regulating the working of the depositories, depository participants, custodians of securities, foreign institutional investors, credit rating agencies and other intermediaries;
- (iv) Registering and regulating the working of venture capital funds and collective investment schemes, including mutual funds;
- (v) Promoting and regulating self-regulatory organisations profiting fraudulent and unfair trade practices relating to securities market;
- (vi) Prohibiting insider trading in securities;

- (vii) Regulating substantial acquisition of shares and takeover of companies;
 - (viii) Promoting investors' education and training of intermediaries in securities market;
 - (ix) Carry out inspection/audit of the stock exchanges and other financial intermediaries;
 - (x) Call for information from any bank/any authority/corporation/agencies in respect of any transaction in securities which is under investigation or inquiry by the SEBI;
 - (xi) Performing such functions and exercising such powers under the Securities Contracts (Regulation) Act, 1956 (SCRA);
 - (xii) Levying fees or other charges;
 - (xiii) Conducting research and performing such other functions as may be permitted from time to time.
- (iii) Investors' awareness campaign :** The major thrust of SEBI has been on educating and informing the small investors which is clearly evident from the motto that 'An ignorant investor is a safe investor'. Keeping complete faith on the above, all endeavours have been made in this direction including the year 2003 as the 'Vigilance Year' or the 'Year of Consumers' awareness. SEBI has organised more than 1000 conferences, exhibitions, seminars, Union Budget Meetings and public meetings for small investors all over India. More than 2 lakh investors took part in various programmes. More than 2,185 workshops have been conducted by SEBI around 500 cities/towns across the country to achieve this goal during 2003-13.
- (iv) Advertisement :** The SEBI has prepared simple "do's and don'ts" for investors relating to various aspects of the securities market. Till 2015, over 700 advertisements relating to various aspects of securities market have appeared in 49 different newspapers/magazines, covering approximately 111 cities and 9 regional languages, apart from English and Hindi. This is objective of educating investors through mass media. SEBI Officials regularly participate in programmes aired by All India Radio.
- (v) Educational materials :** The SEBI has prepared a standardised reading material and presentation material for the workshops.
- **Website dedicated to Investors' Education :**
SEBI has also dedicated a particular website for educating the investors : <http://investor.sebi.gov.in>
- (vi) Cautionary message on television :** With a view to use the electronic media to reach more a larger number of investors, the SEBI often prepares a short cautionary message in the form of a 40 seconds filmlet, and the same is being aired on television.
- (vii) Protection to retail investors :** Retail investors are not in a position to identify and/or appreciate the risk factors associated with certain scrips or schemes. As a result, they are not able to make informed investment decisions. The SEBI has strongly requested small investors to take adequate precaution before investing in any forthcoming IPO issues. It is observed that 9 out of 10 companies have dubious promoters and merchant bankers. Investors have also been cautioned not to invest in niche B & Z category listed companies who are declaring excellent quarterly results as its authenticity is doubtful.
- **Critical appraisal of Investors' Protection undertaken by SEBI :**
By the beginning of the new millennium in 2000, the SEBI has strengthened and established itself as an all powerful regulatory body for the capital market. Intermediaries such as Stock Exchanges, listed companies, Venture Capital Funds, Mutual Funds etc. are now under the close vigil and constant monitoring of SEBI. These measures include permission for a lock-in, away trading via net with purchase/sell orders to be mutual through the website of brokers, etc.

SEBI had given directives to the listed companies, and to the top 100 companies in particular, to follow the code of corporate governance. The contrary scenario was that only the big shots were the net and the small ones were still striving to uphold their existence. It is pointed out that the role of SEBI as a watchdog is actually a dog without teeth. It only pretends to fight against manipulators and finally these people can get an escape route for their manipulation. It is concluded that though SEBI surmounted several obstacles on the way to development of a market with due care for investors' interests and greater transparency in the affairs of stock exchanges, there still remain many loopholes in the system. Financial analysts are of the opinion that the Indian investors have been steadily fleeing out of the market despite the apparent spread of 'equity cult'. So, it calls for immediate attention of the government to frame and effectively implement measures to protect the interests of investors, and to restore confidence upon the stock market.

Summary

A financial system encompasses the interlinkages existing among the economic agents and institutions that together make up an economic ecosystem. The essence of the term 'financial' signifies the resources and operations for enabling the conduct of two principal and broad defined economic activities namely, production and consumption.

The concept of 'finance' corresponds to that of money, inasmuch as it can be recognised as the life-line of financial assets, which is the case to do with the initial stage of economic development when people resort to money banking as the only means of savings.

The concept of financial system lies in the coordination of three fundamental entities, namely financial markets (which refers to the financial intermediaries in broader sense as at large, financial markets namely money market, capital market, bond market and financial institutions).

The operation of financial system runs in both the direct and indirect mode. In direct mode it involves financing by business entities directly from general public through issue of financial claims or by borrowing from them with the help of investment bank, brokers etc. On the other hand, indirect mode of financing is mediated through third party entities like, mutual fund, insurance companies etc.

The fundamental role of financial system lies in mobilising savings formed by households, institutions, firms etc. to enable flow of funds as necessary for financing production activities of firms (as in support of their R&D working and fixed capital requirements, in particular). To put it differently, financial system acts as the conduit for the funds to flow from the segment of economy where there is a surplus to be invested where there is a deficit and thus, help in keeping the overall economic system functioning as a unit in the optimum mode by the gap between the demand for and the supply of funds.

In a financial system, financial markets are broadly classified into – (a) money market and (b) capital markets. While money market facilitates short term loans through various instruments like, treasury bills, commercial papers, certificate of deposit etc., capital market is instrumental in channelising long term flows. Money market can be in turn segmented into – (a) money market and (b) bond and security market. The money market is concerned with trading of short term securities (treasury bills and other government securities to meet the demand-supply criteria) in respect of financing short run, the other is financial markets, namely, inter-bank call rate and lending rate of Deposits and Finance (known as India call market), on the other side, essentially comprises – (a) Primary, Issue Market and (b) Secondary market or Bond Market. Primary market facilitates the introduction of a new share (such as equity, preference shares, debentures etc.) so as to enable corporate entity or listed business entities to raise financial resources. Secondary market, on the other hand, is concerned with the trading of shares among the individual investors who are at large led by the motive of making gains through arbitrage. Moreover, it

is in this segment where price fluctuation is witnessed which is key to understanding investors' behaviour about the state of economic activities and their expectations on future prospects. Thus apart, the capital market consists of derivative market where financial derivatives, such as, options, forwards, futures and swaps are traded. Financial derivatives refer to the class financial instruments which have their value being determined from the value of some underlying asset, like share or bond.

Objective Question Bank

Q. 1. What is meant by financial system?

Or: Write a brief note on the 'financial system' of a country.

Ans.: A 'system' is considered to be a set of interconnected parts which function together in a particular fashion to attain some particular objectives. The financial system refers to a set of activities which facilitates transfer of financial resources from the savers to the borrowers. Generally, the business enterprises and the government are considered to be the borrowers in an economy while the individuals and households are regarded as savers. In any economy these households (or individuals), business enterprises and the government are considered as economic agents whose economic activities are performed by these agents. The financial system can be considered as a set of institutional arrangements through which surplus financial resources are mobilised from the savers (i.e., the surplus spending units) and are transferred to the investors (i.e., the deficit spending units).

Q. 2. State the significance of financial system.

Ans.: The significance and the role of the financial system in fostering economic growth of any country can be better understood by reviewing the following issues:

- Mobilisation of savings:** A sound financial system plays a significant role in mobilising savings for channelling the same to several productive activities.
- Growth in investment:** A good financial system can also lead to an optimal allocation and efficient utilisation of mobilised savings through investment in productive fields.
- Capital formation and greater flow of capital:** A strong and vibrant financial system also helps in the formation of capital in an economy.
- Connecting savers and investors:** A financial system plays the most crucial role in establishing a link between the ultimate borrowers (or the investors) and the savers in an economy.
- Creation of Financial Assets:** The financial system also plays a significant role in creating different types of financial assets to suit the varied needs of both savers and investors.
- Contribution towards economic growth:** The economic growth of a country depends on the growth rate of Gross Domestic Product (GDP) or Gross National Product (GNP) of a country over time. A strong and vibrant financial system can contribute towards this growth process through greater mobilisation of savings, channelling the savings towards productive investment and capital formation.

Q. 3. Briefly discuss the role of financial system in the economic development of a country.

Ans.: While economic growth signifies an increase in gross domestic product (GDP) or per capita life of a country, economic development implies a qualitative improvement in the standard of living of the common people. The role of a financial system in economic development can be understood from the following points:

- A strong financial system helps in mobilising savings:** Several banking institutions can contribute positively towards the mobilisation of savings particularly in less developed or developing countries.

- A vibrant financial system helps in channelling the mobilised savings towards productive investment:** The financial institutions or intermediaries act as important agents through which mobilised savings can flow to different investment projects.
 - A well-knit financial system fosters the process of capital formation:** Capital formation occurs an increase in the physical stock of capital in an economy through investment.
 - A strong financial system then contributes towards the production and productivity growth in an economy:** Higher investment and capital formation can result in extensive increase in production and productivity in different sectors of the economy.
 - A strong financial system contributes to higher employment and income opportunities:** As income in investment and productive activities can lead to higher employment and income opportunities among the common people. So, the country can progress towards the path of economic development.
- In this way, A strong financial system helps in implementing the social security programmes and other development programmes of the government.

'Financial assets are part of an investor's wealth, but not part of national wealth'— Explain.
The 'Laissez faire' effect of financial markets in the speculative activities in financial markets may only lead to greater volatility in the prices of securities in the stock market. Thus, stock index (say the SENSEX or NSE NIFTY in India) may rise leading to significant increase in the market values of some financial assets. But that does not mean a simultaneous increase in 'real' output of the economy. Thus, capital gains made out of such speculative transactions in the financial market may increase the 'wealth' of an individual investor, but that would not be considered as a part of national wealth or national output. Any 'value' or 'income' which is not generated out of current production, is not included in national income estimation. Hence, it is often said that financial assets are part of an investor's wealth, but not part of national wealth.

Q. 4. Briefly state the role of financial intermediation in an economy.

- Financial Intermediary Institutions play an important role in the financial system.** They act as an efficient conduit for channelling the funds from the surplus economic units to the deficit economic units and ensure effective utilisation of such funds for productive purposes. The roles of the financial intermediaries are:
- Establishing a relationship between the savers and investors:** The financial intermediaries establish an indirect relationship between the savers and investors, and try to satisfy the demands of both savers and investors.
- Resource mobilisation & capital formation:** Financial intermediary institutions raise funds by accepting deposits from or by selling their securities or write to the public. Productive investment of mobilised savings leads to capital formation in the economy.
- Maintaining liquidity:** Financial intermediary institutions maintain adequate liquidity in the system. They invest the funds raised from the public very judiciously and rationally so that the invested amount can be liquidated as and when required.
- Reducing degree of risks:** These institutions invest in various types of securities in a diversified way so that the overall risks can be reduced to a great extent.

Q. 5. Write a short note on indirect finance.

- When the required funds are raised by the business houses through some intermediaries, such as mutual funds, insurance companies, etc., then the process is called as indirect finance.** These intermediaries provide long-term finance to the industries from the corpus created by selling their units, policies, etc. These institutions have the accountability across the country and raise sufficient amount of funds from the households and make these funds available for industries. In this way, they ensure speedy capital formation in the country. So, in case of indirect finance, the ultimate borrowers (viz., the investors or industrial houses) do not raise their required capital



directly from the ultimate savers. Instead, the required capital is collected through some financial intermediaries such as commercial banks, mutual funds, insurance companies etc.

- Q. 7. Distinguish between organised financial market and unorganised financial market in India. [C.U. B. Com. III, 2013, 2014]

Ans. : Organised financial market is that financial market which is governed by some regulatory bodies through their predetermined rules and regulations. In case of unorganised financial market, operations or players are not governed by any regulations.

Basis	Organised financial market	Unorganised financial market
Norms and Regulations	Transactions of this market are highly regulated by the norms and regulations of the regulators.	Transactions of this market are not regulated by any norms and regulations.
Activity	The main activities of this market are accepting deposits from the savers and investors and provide credit to entrepreneurs and others.	This market provides credit to the individuals and others.
Nature of Transactions	Any transaction held in this market is formal in nature.	Any transactions held in this market is informal in nature.
Fairness	Here, absolute degree of transparency in every transaction is observed.	Here, lack of transparency is observed in every transaction.
Management	Institutions or players in this market are managed by professionals and experts having optimum level of knowledge about the securities market.	Players in this market are not managed by professionals or experts.

- Q. 8. Distinguish between organised financial institutions and unorganised financial institutions in a financial system.

Ans. : Organised financial institutions are the institutions of the organised financial market governed by the specific rules and regulations of the apex regulatory bodies. However, the unorganised financial institutions are the institutions of unorganised financial market which is not governed by any specific rules and regulations of any regulatory body.

Basis	Organised financial institutions	Unorganised financial institutions
Maintenance of Books of Accounts	These institutions keep proper books of accounts as per the guidelines issued by the highest accounting body.	These institutions do not keep proper books of accounts.
Transparency	Activities of these institutions have transparency.	There is a lack of transparency in the activities of these institutions.
Regulation	These institutions are regulated under the specific regulatory bodies.	These institutions are not regulated under any specific regulatory body.
Volume of Transactions	Transactions which take place in these institutions are voluminous.	Transactions which take place in these institutions are relatively small.
Examples	Banks, Mutual Fund Houses, Development banks, etc. are the examples of these institutions.	Mahajans, Private money lenders, Indigenes bankers, etc. are the examples of these institutions.

- Q. 9. Give an overview of the structure of Indian financial system.

Ans. : As per se, the structure of the Indian financial system resembles the financial system of a developed economy with the following major components : (a) Financial Markets in India ; (b)

(c) Financial Institutions in India ; (d) Financial Services in India ; and (e) Financial Regulators in India.

The financial markets in India are broadly categorised into two segments : money market and capital market. The short-term securities are traded in the Indian money market. This money market is again divided into two parts : Organised part and the unorganised part of the Indian money market. The organised part of the money market is controlled or regulated by the Reserve Bank of India (RBI).

The financial instruments which are traded in the organised part of the money market are : Call money, Treasury Bills, Commercial Papers, Certificate of Deposits, Repo (Repurchase Agreements), etc. On the other hand, the unorganised segment of the Indian money market does not come under the control and regulation of the RBI. The rural money-lenders, mahajans, indigenes bankers, etc. are the major players in this segment.

The capital market in India facilitates transactions in long-term securities. This capital market is again divided into two parts : primary market or the new issues market and the secondary market. In the primary market, newly issued shares and debentures are available. In the secondary segment of the Indian capital market, a large number of second-hand shares and debentures are traded in the stock market.

The financial institutions in the Indian financial market can be classified into banking institutions (e.g. commercial banks, cooperative banks etc.) and non-banking institutions (e.g. insurance companies, mutual funds etc.).

Several types of financial assets or instruments are transacted in the Indian financial market. The financial assets such as certificate of deposits, commercial papers, call money, repo & reverse repo, Treasury Bills, etc. are traded in the money market while the financial assets such as equity shares, preference shares, debentures, units of mutual funds, long-term government bonds etc. are traded in the capital market.

A large range of financial services are now available in the Indian financial market. These services include merchant banking service, factoring and forfaiting service, lease and hire purchase finance services, etc.

The financial regulators in the Indian financial market include SEBI (regulator of the capital market) and RBI (regulator of the money market).

- Q. 10. What do you mean by fund-based financial services and fee-based financial services?

Ans. : Fund-based financial services are those services where financial intermediary institutions provide 'back-to-the-business' firms for meeting their short-term and long-term requirements. Such services include — (i) Equipment leasing, (ii) Hire purchase, (iii) Bill discounting, (iv) Venture capital, (v) Factoring, (vi) Housing finance, (vii) Insurance services, (viii) Underwriting, etc.

Fee-based financial services are those specialised services which are rendered by some institutions managed by professionals regarding technical matters. They charge fees for their services. These are various types of fee-based financial services. These are — (i) Merchant Banking, (ii) Asset Management, (iii) Portfolio Management, (iv) Capital Reorganization, (v) Acquisition and Merger related services and (vi) Corporate Counselling.

- Q. 11. Write on the important functions of financial market.

Ans. : What is meant by financial market? State the need and functions of financial market.

Ans. : Financial markets are integral parts of the Indian financial system. These markets signify such institutional arrangements which facilitate the transaction of various short-term and long-term financial assets.

The basic needs for and functions of financial markets are :

- (i) **Help in financial transactions** : In underdeveloped countries, most of the transactions are effected through cash. But it possesses huge risks. Efficient financial markets provide various



facilities (like cheques, bank draft, credit card, etc.) to transact without incurring with undue risk.

- (2) **Encouragement of savings:** Efficient financial markets provide various opportunities to the people of the country to save. Some people are eager to save for long-term periods, while others are eager to save for short-term periods. Organised and well-developed financial markets provide short-term and long-term savings opportunities for the people of the country.
- (3) **Mobilisation of savings:** Mobilisation of savings is the important function of financial markets. Mobilisation of savings increases along with the increase in efficiency of financial markets.
- (4) **Maintaining continuity of the production through greater investment:** Financial markets provide required capital to the industries as and when required and keep up the flow of investment and production. It provides long-term capital to entrepreneurs to start a new project or to expand existing operations.
- (5) **Capital formation:** Capital is the important factor of production. Capital formation of a country depends upon creation of savings, mobilisation of savings and investments. The rate of capital formation is high in those countries whose financial markets are developed and well organised.
- (6) **Help to the Government:** When the government faces fiscal deficits, financial market provides credit to the government. The government raises funds by selling securities. So, the financial markets act as source of the government finance.

Q. 12. Give an overview of the Financial Market in India.

Or, Give a brief overview of the components of the Indian Financial Markets.

Ans. Financial markets are integral parts of the Indian financial system. These markets signify such institutional arrangements which facilitate the transaction of various short-term and long-term financial assets. These markets are segregated into money market, capital market, foreign exchange market and the financial derivative market.

[Draw the Flow chart as shown in Section 6.2, to indicate the components of the Financial market in India]. Indian financial market has different segments as mentioned below:

- (A) **Money Market:** It deals with the transactions of raising and supplying money in a short period not exceeding one year through various instruments. The sub-markets of the money market are: (i) Call money market, (ii) Treasury bill market, (iii) Commercial bill market, (iv) Commercial Paper market, (v) Certificate of Deposit market, (vi) Repurchase agreement market or Repo market and Reverse repo market. The participants of the Indian money market are the commercial banks, some financial institutions, the Reserve Bank of India, the domestic and foreign investors, primary dealers, etc. The money market is regulated by the RBI.
- (B) **Capital Market:** Long-term securities are transacted in this market. The participants in the Indian capital market are: (i) Investment firms, (ii) Insurance companies, (iii) Special financial institutions, etc. The Securities market is the principal part of the Indian capital market and it is segregated into two parts: (a) Primary market (or New issue market), and (b) Secondary market (Share market). The capital market is regulated by the Securities and Exchange Board of India (SEBI).
- (C) **Foreign Exchange Market:** It is a highly organised market where the currencies of the various countries are traded. In this market domestic currency or national monetary unit or rupee is exchanged for foreign currencies. The participants in this market are export and import houses, commercial banks, etc.
- (D) **Financial Derivatives Market:** Different organisations and investors who want to derive values from various underlying assets of any financial instrument, participate in this market. Derivatives are written contracts between two parties known as counterparties and the value of derivatives is derived from its underlying assets. Underlying assets can be agricultural and

other commodities, currencies, equity shares, gold, silver, etc. Most popular types of derivatives are: (i) Forward contracts, (ii) Future contracts, (iii) Option techniques – call option and put option, (iv) Swap techniques, etc.

Differences between Commercial Paper and Certificate of Deposit

Both Commercial Paper and the Certificate of Deposit are money market instruments. Following are the distinctions between Commercial Paper (CP) and Certificate of Deposit (CD).

Commercial Paper (CP)	Certificate of Deposit (CD)
A commercial paper is an unsecured, short-term promissory note. It is transferable by delivery.	A certificate of deposit is an unsecured, negotiable, short-term instrument.
These are issued by large manufacturing concerns and financial companies in large denominations.	Commercial banks and development financial institutions issue Certificate of Deposit.
These are issued for a period of 30 days to 360 days.	Maturity period of this instrument varies from 3 months to 2 years.
It was introduced in the Indian money market in January, 1991.	It was introduced in Indian money market in June, 1989.
Bank, individuals, corporate organisations, NBFI invest in commercial papers.	Individuals, associations, corporate organisations, institutions invest in Certificate of Deposit.

Write a short note on: Repo and Reverse Repo

Repo refers to a transaction in which a participant acquires funds immediately by selling securities with an agreement to repurchase the same after a specified time at a specified price. So, it is a temporary sale of debt involving transfer of ownership of the securities. It also refers to a trade forward transaction, as it acquires funds by selling the security on a spot basis and repurchasing the same on a forward basis. Reverse repo is exactly the opposite – a party buys a security from another party with an agreement to sell it back on a later date at specified price. This transaction is repo for one party and reverse repo for another party. Reverse repo earns some returns on idle cash held by the party. The RBI uses repo and reverse repo as the instrument for controlling credit supply being short-run in Indian economy. The repo rate is increased to control the inflationary situation, while it is lowered during economic recession. In case of repo operation, the commercial banks can get short-term fund from the RBI by selling approved securities to the RBI with a repurchase agreement to buy these securities, say, after 14 days. The interest rate charged for the discount rate on these securities is called as repo rate. Here, the objective is to meet the excess demand for liquidity. In case of reverse repo operation, the RBI sells short-term securities to the commercial banks with a repurchase agreement. The interest rate or the discount rate on these securities offered by the RBI is called as the reverse repo rate. Here, the object is to pump out excess liquidity.

Review the structure of Indian Money Market.

Money Market is one of the important segments of the financial system in an economy. It is an institutional arrangement that facilitates transaction of short-term securities with a maturity period of one year or less. In Indian Financial System also, the money market, which is regulated by the Reserve Bank of India, plays an important role in such short-term financial transactions. Indian money market is composed of two distinct sectors – organised sector and unorganised sector. The participants of organised sector are RBI, nationalised banks, cooperative banks, Regional Rural Banks, Money Market Mutual Funds (MMMF), Discount and Finance House of India (DFHI), Primary Dealers (PDs), Satellite Dealers (SDs), Securities Trading Corporation of India (STCI), Clearing Corporation of India Ltd. (CCIL), etc. The unorganised sector is comprised of money lenders, collective investment schemes, indigenous bankers, etc. [Draw the flow chart showing the structure of Indian Money Market].

The MDMFs were introduced in India in 1991 to provide an additional short-term avenue for investment and bring money market investments within the reach of individuals. For example, UTI Money Market Fund (1997), ICICI Prudential Money Market Fund (2002), Tata Money Market Fund Regular (2004), etc.

The CMMI was set up jointly by the RBI, some public sector banks and All-India Financial Institutions. It was incorporated in March, 1988 and started functioning since April, 1988. The objective was to promote the secondary market of the money market instruments (call money, Treasury Bills, Commercial papers, Certificate of Deposits etc.). The PDs are those recognised financial institutions (approved by the RBI) which regularly take part in the purchase of Government securities in the primary and secondary markets. The SDs are in the second lot in the trading and distribution of the G-sec. The STCI was set up jointly by the public sector banks and All-India Financial Institutions in May 1994. The objective was to develop an active secondary market in G-sec and bonds issued by the public sector undertakings. The CCIL was set up in 2002 and it acted as a clearing house for the settlement of inter-bank foreign transactions and market trade in G-sec.

Q. 16. Describe the characteristics of Indian money market.

Ans.: A well-developed money market is a must for economic development of a country. India's money market plays a pivotal role towards the economic development of the country. Salient characteristics of Indian money market are indicated below:

- Organised and unorganised structure:** Indian money market may be divided into organised money market and unorganised money market. The participants of the organised money market are commercial banks, co-operative banks, rural banks, etc. The organised sector is under strict control of the RBI. The RBI is the apex body in the Indian money market. Unorganised money market consists of indigenous bankers, domestic money-lenders, etc. They are not under the control of the RBI.
- Uneven development of banking facilities:** Adequate banking facilities are not available in rural areas. Major portion of bank branches in India is located in urban areas.
- Uneven interest rate and financial dualism:** Financial dualism exists in the Indian money market. It implies co-existence of higher interest rates charged by the non-institutional sources of credit (say, by the money lender in the rural credit market) and a relatively low interest rate charged by the institutional sources of credit (say, by the commercial banks).
- Increasing depth of the market since 1991:** The depth of the Money Market (MM) depends on the number and variety of financial instruments transacted in the MM. It has been observed that the Indian MM has gained considerable depth over the last few years with the initiatives of creating a strong Treasury Bill market, Call Money market, Commercial Paper & Certificate of Deposit markets, Money Market Mutual Fund market, introduction of repo and reverse repo operations, etc.
- Increasing breadth of the MM:** It depends to a large extent on the number of players or participants in the MM. It has also been observed that the breadth of the Indian MM has widened with the emergence of increasing number of private sector commercial banks and participants like Discount and Finance House of India (DFHI), Primary Dealers (PDs), Security Dealers (SDs), Securities Trading Corporation of India (STCI), Clearing Corporation of India Ltd. (CCIL), etc.

Q. 17. Distinguish between Organised money market and Unorganised money market.

Ans.: Organised segment of the money market is that market which is regulated by specific rules and regulations of the regulatory bodies. However, the unorganised money market is that market which is not governed by specific rules and regulations of any regulatory body. Some of the differences between these two segments of the Indian Money market are shown here:

Basis	Organised Money Market	Unorganised Money Market
Guidelines	Here, operations are regulated and guided by the established terms and guidelines.	Here, operations and transactions are not regulated and guided by specific rules and regulations of regulatory bodies.
Players	The RBI, commercial banks, Regional Rural banks, discount houses etc. are the participants in this market.	Mahajans, Merchant, Moneylenders, Bhattis, other indigenous lenders, etc. are the participants in this market.
Volume	In this market, the volume of transactions is too large.	The volume of transactions is relatively small in this market.
Nature	By nature, it is a formal money market.	It is an informal money market.
Rate of interest	Here, the interest rate is regulated and it is relatively low.	Here, the interest rate is not regulated and it is relatively high.

Q. 18. State the features of Treasury Bill market in India.

The Treasury bills or T-bills, which are money market instruments, are short-term debt instruments issued by the Government of India and are presently issued in three tenors, namely 91 days, 182 days, and 364-days. Treasury bills are zero coupon securities and pay no interest. They are issued at a discount and redeemed at the face value at maturity. Some of the features of T-bills are:

- They are negotiable financial securities issued by the government.
- They are highly liquid securities traded in money market.
- There is no risk of default.
- Return or yield is assured.
- Transaction cost is very low.
- They are redeemed at par on the maturity date.
- These bills are available for a minimum amount of ₹ 25,000 and in multiples thereof.
- They form the most important segment of the money market.

Q. 19. What is meant by certificate of Deposit?

The Certificate of Deposit is a money market instrument and is issued by the commercial banks and other development banks for raising short-term funds. It is an unsecured and negotiable short-term instrument issued in bearer form. Scheduled commercial banks and co-operative banks can issue certificate of deposit for a period of not less than three months and upto a period of not more than one year. The Certificates of Deposit (CDs) were introduced in India in June 1989. Only scheduled commercial banks excluding Regional Rural Banks (RRBs) were allowed to issue CDs. However, in 1992, the development finance institutions were also allowed by the RBI to issue CDs (e.g., six financial institutions, viz. IDBI, IDCI, KVIC, SIDBI, IIFIL & EXIM Bank were permitted to issue CDs). The CD differs from a Fixed Deposit Receipt in two respects. First, it is issued for a big amount and second, it is freely negotiable. Deposits in these instruments can be made in ₹ 1 lakh and its multiples. However, the banks and financial institutions cannot grant loans against these CDs.

Q. 20. Distinguish between Repo and Reverse Repo.

The RBI uses repo and reverse repo as the instrument for controlling credit supply during short run in Indian economy. The repo rate is increased to control the inflationary pressure, while it is lowered during economic recession. The difference between repo and reverse repo are shown here:



Basis	Repo	Reverse Repo
Meaning	It means a transaction whereby the participant can acquire funds by selling securities and simultaneously agrees to repurchase the same after a specified time at a specified price.	It signifies a situation where one party buys the security from another party with a commitment to sell it back to the latter after a specified time at a specified price.
Purpose	It enables collateralised short-term borrowing and lending through sell/purchase operations in debt instruments.	This transaction is undertaken particularly to earn additional income on idle cash balance.
Implication for liquidity	Repo implies injection of liquidity in the economy.	Reverse repo implies absorption of excess liquidity.
Interest	It implies the interest rate charged by the lender upon the borrower.	It implies the interest rate offered by the borrower to the lender.

Q. 21. Define call money market. Who are the participants or players in the Indian call money market?

Ans. : Call money market is an inter-bank financial market where day-to-day surplus funds of banks and other financial institutions are traded in. This market provides loans for a very short-term period whose maturity period lies between one day and a fortnight and the loans are repaid on demand. This is a highly liquid market. It is an important segment of the Indian money market. When a bank faces liquidity crunch and does not have much liquid cash to maintain the minimum cash reserve with the RBI, it procures short-term loans from the call money market to fulfil its requirement. Other banks whose liquid cash position gets enhanced and remain idle for a while provide call loans in this market and earn some interest. Following institutions are the participants or players in the Indian call money market : (1) RBI and other scheduled commercial banks, (2) Non-scheduled commercial banks, (3) Foreign banks, (4) Co-operative banks, (5) Life Insurance Corporation of India (LIC), (6) General Insurance Corporation of India (GIC), (7) Unit Trust of India (UTI), (8) Discount and Finance House of India (DFHI), (9) Securities Trading Corporation of India (STCI), (10) Industrial Development Bank of India (IDBI), (11) Industrial Credit and Investment Corporation of India (ICICI), (12) Industrial Finance Corporation of India (IFCI), (13) National Bank for Agricultural and Rural Development (NABARD), (14) Primary Dealers, etc. Free permission is required from the Reserve Bank of India to participate in the call money market.

Q. 22. Discuss the nature of Indian call money market.

Ans. : Call money market is an inter-bank financial market where day-to-day surplus funds of banks and other financial institutions are traded in. The nature of the Indian call money market is discussed below :

- Arranging short-term loans** : Call money market arranges for very short-term loans to the banks who need it for maintaining the stipulated rate of cash reserve with the RBI. The tenure of the loans lies between 1 day to 14 days.
- Short repayment tenure** : Banks procure call loans from this market for a maximum period of 14 days. Within this period, call loans are settled alongwith stipulated rate of interest.
- Safe and secured** : As this market is strictly regulated by stringent rules and regulations framed by the RBI, call loans become safe and secured.
- Participation of institutions** : Mostly commercial banks actively participate in this market. Apart from the commercial banks, other participating institutions are cooperative banks, LIC, UTI, GIC, IDBI, ICICI, IFCI, NABARD, Primary Dealers etc.
- Call rate** : Interest paid on call loans is known as call rate. This rate fluctuates every now and then. It is determined by the market and depends on demand for and supply of call loans in the market.

Location : Indian call money market is situated mostly in big cities like Mumbai, Kolkata etc. Its existence is not witnessed in small cities and towns. However, there is no physical location of this market.

What are the drawbacks of Indian call money market?

Indian call money market has been suffering from some drawbacks. The reasons of Indian call money market are discussed below :

- Underdeveloped bill market** : Indian bill market is not well developed. Banks are not willing to provide credit to the brokers of bills. So, demand for call loans in the bill market remains less.
- Not easily available** : Call loans are available only when banks and other participants have surplus cash. So, loans are not readily available as and when needed.
- Lack of eagerness** : Indian banks do not provide much credit to share brokers or their representatives. It dampens the depth of call money market as the demand for short period of loans are not met by the banks.
- Poor participation** : All the commercial banks in India do not participate in this market. Indian call money market has not become well developed due to lack of all round participation of banks in this market.
- Adequate cash reserve** : Banks maintain adequate cash reserves throughout the year. It leads to smaller requirement of funds to meet their various reserve ratios to the RBI.

Recent trends in the Indian money market

Since early 1990s, various proactive measures have taken by the Reserve Bank of India (RBI) in view of the money market activities in order to strengthen its structure and enhancing the liquidity in the system. The administered interest rate regime has been replaced by market-determined interest rate regime. The important changes that took place in the money market during the last two decades are discussed below :

- Encouraging the entry of private financial institutions** : The government of India has given more impetus on the establishment of financial institutions under private ownership. It has also opened up the insurance sector for the private insurers and allowed foreign direct investment (FDI) in the insurance sector upto 26 per cent (and subsequently upto 49% of the equity capital).
- Restructuring the development financial institutions (DFIs)** : Development financial institutions have been given more powers and liberty in several matters such as providing long term credit without government guarantee, operational flexibility, etc.
- Greater autonomy to commercial banks** : The RBI has given more autonomy to the commercial banks in respect to their operations. The periphery of the operations of the commercial banks has been expanded.
- Introduction of Money Market Mutual Funds (MMMFs)** : Money market mutual fund (MMMF) was introduced in the system. It has been playing an important role towards the development of the money market.
- Introduction of repo & reverse repo** : In order to enhance liquidity in the system a new instrument, 'repo' or repurchase agreement was introduced by the RBI since 2000 as part of the Liquidity Adjustment Facility (LAF). The RBI uses repo and reverse repo operations with primary dealers and scheduled commercial banks through its open market operations. Through repo rates, the RBI controls credit in the money market.
- Introduction of Market Stabilisation Scheme (MSS)** : It was introduced in 2004. The RBI, under this scheme, is permitted to issue short dated government securities and treasury bills for improving liquidity management in the system and maintaining stability in the foreign exchange market.

- (7) **Technological upgradation** : Upgraded technologies have been introduced in the money market to make facilitate quick transactions.

Q. 25. Discuss the important functions of new issue market or primary market.

Ans. : The new issue market or primary market is a market wherefrom companies raise long term capital by issuing their securities such as equity shares, preference shares and debentures. This market meets the long-term capital requirements of companies. The basic functions of the new issue market of the primary market are noted below :

- Helps to investors or savers** : The primary market helps the savers or investors having investible funds to deploy that in new securities of companies.
- Transfer of resources** : The basic function of this market is to facilitate transfer of funds from the lenders to the ultimate borrowers or the entrepreneurs for establishing new enterprises or undertaking productive activities.
- Conversion function** : This market facilitates the partnership enterprises and private limited companies to convert their businesses into public limited companies by issuing shares and debentures to the public.
- Advisory function** : Primary market renders different types of services to the business enterprises relating to the issue of new securities, pricing of issues, legal matters, processing of issues, etc.
- Underwriting function** : Underwriters in this market provide assurance to the issuing companies to purchase the unsold securities and make the issue successful.
- Promoting economic growth** : Sustainable economic growth of a country largely depends on the establishment of new industries and expansion of existing industries. The primary market supports this process.

Q. 26. Explain the major distinctions between capital market and money market.

Ans. : Capital market provides long-term capital to industries whereas money market provides short-term capital or working capital to industries. The major distinctions between capital market and money market are indicated below :

Basis	Capital Market	Money Market
Definition	An institutional arrangement for the transaction of long-term securities.	An institutional arrangement for the transaction of short-term securities.
Main Function	Provide medium-term and long-term capital to the business firms.	Accept deposits from the public and to provide short-term capital to banks, industry and commerce.
Credit Creation	Capital market cannot create credit in the financial system.	The commercial banks in this market, through their lending operations, can create credit money in the financial system.
Fund Utilization	Mainly used as fixed capital by the business organisations.	Mainly used as working capital by the business houses.
Participants	Insurance companies, government trust, financial institutions and stock exchanges in securities market.	The RBI, commercial banks, co-operative banks, indigenous money lenders, etc.
Regulation	Regulated by the Securities and Exchange Board of India (SEBI).	Regulated by the Reserve Bank of India (RBI).

Explain the relationship between the new issue market and stock exchange.

Explain the relationship between the new issue market and the secondary market.

The new issue market or primary market is that market where new securities such as equity shares, preference shares and debentures of corporate organisations are issued for raising fresh capital. A secondary market or stock market is an organised market where buying and selling of existing securities takes place. There exists a close relation between the primary market and secondary market. Primary market provides opportunity to the corporate organisations to raise fresh capital by issuing their shares and debentures from the general public and institutions. Afterwards, these securities can get listed on the recognised stock exchanges, from where investors purchase the securities of the new issue market if they find that the issuing company has the potential to create wealth for its shareholders in the long-run. Investors may sell their securities in the secondary market as and when they get their desired returns from their investments in the secondary market. The secondary market helps the investors to liquidate their securities which they subscribed from the primary market. Without this service of the secondary market, primary market will not be able to help the corporate organisations to raise capital from their issues to the public. So, the success of the new issue market is the primary market largely depends on the secondary market or stock market. In the secondary market, securities of the listed companies are traded. Investors put their money in buying good quality shares for a longer term and create wealth. Primary market provides good quality shares to the secondary market. Unless there exists a good primary market in the financial system, secondary market would fail to provide quality stocks for the investors. [Show the flow chart as shown in Subsection 2.6.10.]

Explain the relationship between the new issue market or primary market and stock market or secondary market.

The main points of distinctions between the new issue market or primary market and the stock market or secondary market are as follows :

Basis	New Issues Market or Primary market	Stock Market or Secondary market
Definition	In this market companies issue equity shares, preference shares and debentures for the first time to raise long-term capital.	Securities of listed companies (with a stock exchange) and are traded particularly with a speculative nature.
Issue	This market provides fresh capital or additional capital to the corporate sector.	There is only a reflow of existing capital in the stock market.
Securities	It deals with new securities such as equity shares, debentures, etc., of corporate organisations.	It deals with existing or already sold securities of the related corporate organisations.
Selling of Securities	Investors subscribe by new securities directly from the issuing companies.	The securities of listed companies are traded in stock exchange.
Location	It has no geographical or physical location.	Stock exchanges are situated in big cities.
Economic Benefits	This market helps the trade, industries, and commerce to grow by providing them fresh capital.	It helps to maintain liquidity in the financial system by facilitating the scope to purchase and sell securities round the year.

Q. 28. Discuss the role of share market (or secondary market) in the Indian economy.

Or 'Stock market plays an important role in Indian economy' — Discuss.

'The share market plays an important role in Indian economy' — Discuss.

Ans.: A share market or the stock market or the secondary market acts as an intermediary between investors and companies. It plays a pivotal role in the economic growth of a country. The role of share market in Indian financial system may be understood from the following points:

(a) From the View Point of Investors:

- Inducement in investment in securities: Share market creates scope for people to invest in various securities of companies and helps them to generate handsome returns in the long-term from the market.
- Transferability of securities: It provides a ready market for buying and selling of securities. It ensures transferability of shares freely.
- Protection of investors' interest: Share market is strictly regulated by various rules, laws and bye-laws for protecting investors' interest.
- Diversification of investments: Share market encourages the investors to diversify their investments for reducing the risks of investments.

(b) From the View Point of Company:

- Procurement of capital: Share market acts as an intermediary between the corporate sector and investors. Companies raise capital by issuing securities from the primary market and get the securities listed on a recognised stock exchange for facilitating trading of such securities.
- Creation of goodwill: When the shares of a company get enlisted on a recognised stock exchange, it elevates the status of that company.
- Diffusion of shareholding: Shares of the listed companies are traded regularly. It enables the companies to diffuse ownership of securities across the country.

(c) From the View Point of the Society:

- Overall economic growth: Share market plays a pivotal role towards the growth of the national economy. It channels the investments of the general people to the effective investment and helps in capital formation.
- Enhances the saving & investment habits among the common people: Share market provides a great opportunity to the savers and investors to invest in securities of companies across various sectors. General people get attracted to invest their savings in this market to generate a fair return. So, it inculcates the saving habit among the common people.

Q. 29. Discuss the role of brokers in stock market.

Ans.: A stock broker is the registered member of a stock exchange performing as a functionary of the exchange to deal with securities on behalf of his clients. As a functionary, a stock broker plays an important role in the stock market. Some of these specific roles are:

- Acting as a liaison: Being the registered members of the stock exchange, brokers are allowed to deal with securities on behalf of their clients. So, a broker acts as a linkman between the stock market investors and the stock exchange.
- Execution of orders: A stock broker executes the orders placed by his clients at the best possible market price.
- Issue of contract note: As and when an order placed by the client is executed, the broker issues a contract note to that client. Through the contract note, the investors come to know about the details of their transactions.
- Maintain secrecy: Stock brokers do not disclose any matter relating to clients' portfolios anyone else.

providing advice: Stock brokers are the experts in the stock market. So, they often advise the clients in taking decisions relating to purchase and sale of shares.

safeguard the interest of the clients: Stock brokers extend the fullest co-operation to their clients so that clients' interest is protected.

Discuss the role of sub-brokers in the stock exchange.

Ans.: As per the SEBI Rules 1992, a 'Sub-broker' means any person not being a member of a stock exchange, acts on behalf of a stock broker as an agent or otherwise for assisting the investor in buying, selling or dealing in securities through such stock brokers. The Sub-brokers play an important role in the stock market. Some of the specific roles played by the sub-brokers are mentioned below:

Executing transactions: A sub-broker transacts business on behalf of the buyer and seller of securities through his broker. So, a sub-broker facilitates to transact in securities to investors and traders.

Liaison: A sub-broker is an agent of a stock broker. He has some clients. He acts as a liaison between his clients and the broker.

Providing service to the investors: A sub-broker renders various services to the investors. He helps the investors in buying and selling securities, transferring fund, transferring securities, etc., on behalf of his broker.

Agency function: A sub-broker is an agent of a stock broker. He helps the broker to enhance the number of his clients, volume of transactions, etc.

Dealing with number of securities: A sub-broker deals with various securities such as equity shares, debentures, mutual funds, etc.

Helps in augmenting the trade volume: A sub-broker, being an important functionary of a stock exchange, helps to augment the volume of transactions in the stock market.

Maintaining secrecy: A sub-broker possesses dried data relating to the clients' portfolio. He keeps these confidential information and does not divulge these information to anyone else in the market.

Write a short note on: Insider Trading.

Or: What do you mean by 'Insider trading'?

Insider trading means dealing in company's shares on the basis of unpublished and confidential information relating to the company in order to earn windfall gain. It is the trading in the shares of a company by persons who are in the management of the company or very close to them on the basis of undisclosed price sensitive information regarding the working of the company in order to gain maximum profits quickly. The examples of the price sensitive information are: (i) Annual financial result of the company, (ii) Declaration of interim dividend and final dividend (withholding of shares at much higher price than the market price), (iii) Issue of bonus shares, (iv) Acquisition of a company, etc. It is an unethical and illegal practice. Indian capital market witnessed several insider trading instances which damaged the sentiment of the capital market. The SEBI (Insider Trading) Regulation, 1992, has empowered the SEBI to probe and investigate any complaint arising against some insiders for violating regulations which are not supposed to be done. The SEBI can initiate criminal proceedings against such insiders.



Q. 33. Distinguish between brokers and sub-brokers operating in stock exchange.

Ans.: Both the brokers and the sub-brokers are the functionaries in the stock market. However, there are certain differences between them. These are mentioned below:

Basis	Stock Broker	Sub-Broker
Definition	A stock broker is a registered member of a stock exchange and performs as a functionary of the stock market to buy, sell and deal in securities on behalf of his clients.	A sub-broker being a non-member of a stock exchange performs as an agent of a broker, and assists the broker in buying, selling or dealing in securities through such stock broker.
Member	He is a registered member of a stock exchange.	A sub-broker is not a registered member of a stock exchange.
Range of Activities	The periphery of activities of a broker is wide.	The periphery of activities of a sub-broker is limited.
Functionary	They are the SEBI-registered functionaries in the stock market.	They are not SEBI-registered functionaries in the stock market.
Brokerage	Total brokerage earning is relatively high.	Total brokerage earning is relatively less.
Speculative Activities	They have numerous scope for involving in speculation activities.	They have little scope for involving in speculative activities.
Right to Lien	Brokers have the right to lien on the clients' securities if dues are not settled by the clients.	Sub-brokers do not have such right.
Volume of Transactions	They involve in high volume of transactions on behalf of their clients.	They involve in low volume of transactions.

Q. 34. Indicate the recent changes in the capital market in India.

Or, Give an overview of recent changes in Indian capital market.

Ans.: Before independence, Indian capital market remained shallow and dull. General people were reluctant to invest in the securities of the capital market. Since independence, particularly since initiation of financial market reforms in 1991, the government of India has been adopting many proactive measures to make the capital market more vibrant. Based on these measures, we can indicate the changes in Indian capital market over the past few decades:

- Regulatory Measures:** There are four legislations governing the securities market. These are—(i) The Securities and Exchange Board of India Act, 1992. As per this Act, the SEBI was set up as the apex regulatory body in the Indian capital market. (ii) The Securities Contracts (Regulation) Act, 1956. It provides for regulation of transactions in securities through the recognised stock exchanges. (iii) The Depositories Act, 1996. It provides for electronic maintenance and transfer of securities of Demat accounts. (iv) The Companies Act, 2013. It sets out the code of conduct for the corporate sector.
- Establishment of various financial institutions:** The government of India has set up several financial institutions such as IDBI, SIDBI, ICICI, SFCs, UTI, etc. for providing medium and long-term capital to industries for productive purposes.
- Nationalisation of commercial banks and some insurance companies:** Since independence the government of India adopted few bold steps such as nationalisation of some commercial banks and the Life Insurance Corporation of India. It helped to strengthen the Indian capital market.

(v) **Depository services:** The government had enacted the Depositories Act in 1996 to facilitate trading and settlement process in the stock market. As per this Act, two depositories were set up in the country, viz., The National Securities Depository Ltd. (NSDL) and The Central Depository Services (India) Limited (CDSL).

(vi) **Introduction of online trading system:** Computerised online automated and computerised trading system has been introduced by the SEBI. It enhances the confidence among the investors, and trading procedures have become very easy.

(vii) **Introduction of robust surveillance system:** The stock market system caters to the confidence and security of the Indian capital market. In order to prevent the subordination and fraudulent activities in the capital market, the market regulator SEBI has installed a strong surveillance system.

Distinguish between futures and options.

The *futures* or *future contracts* refer to transferable legal agreements between two parties entered into at present to exchange any financial instrument (or even a commodity) at a predetermined price at some fixed future date. These contracts obligate the seller (called as *short*) of a particular asset to deliver the entire or specified quantities to the buyer (called as *long*) at some fixed future date at a contracted price. An *option* is a contractual agreement which confers a right but not the obligation upon the buyer or the holder to buy (or sell) the call (put) option at a specified price or at a predetermined price on or before the specified date in the future. The differences between the *futures* and *option contracts* are shown below:

Futures	Options
In the <i>future contracts</i> , both the buyers and the sellers are required to perform the contract.	Here, only the seller (called as <i>writer</i>) is required to execute the contract.
In a <i>future contract</i> , premium money is not required to be paid by any of the parties.	Here, the buyer has to pay the <i>premium</i> to the seller (writer).
In <i>future contract</i> , a longer maturity period is desired.	Here, the maturity period is comparatively short.
The holder of the contract is exposed to a huge downside risk and has the scope for generating high returns.	Here, the loss incurred by the buyer is minimised. The maximum amount of loss he may have to suffer is the premium paid by him.
Less margin money is required to be paid by both the parties.	Here, only the seller (or <i>writer</i>) has to pay the margin money.

Distinguish between call option and put option.

Both *call option* and *put option* are the derivative instruments used by the investors and the traders having a high degree of risk appetite either for hedging their portfolios or for speculation (aiming to have quick profit). The differences between the *call* and *put options* are shown below:

Basis	Call Option	Put Option
Definition	It is that derivative technique which provides a right to buy an underlying asset (i.e., shares) at a predetermined price on or before a specified date by paying a premium.	It is that derivative technique which provides a right to sell an underlying asset (i.e., shares) at a predetermined price on or before a specified date by paying a premium.
Risk	The risk of <i>call option</i> buyer is restricted but the seller is exposed to an unlimited risk.	The risk of <i>put option</i> buyer is unlimited and the seller's risk is restricted.

Basic	Call Option	Put Option
Right	It provides a right to buy an underlying asset.	It provides an obligation to sell an underlying asset.
Accountability	Call option buyer is not compelled to buy. If he is in a position where he can make profit by exercising his option, then he will buy.	Put option seller is not compelled to sell. If option holder is willing to make profit by applying option, he can exercise his option.
Nature	It represents a long position in a stock, i.e., here the option holder remains optimistic in nature.	It represents a short position in a stock, i.e., here the trader remains pessimistic in nature.



Assignment

Short-answer Type Questions

- What is meant by finance? (See Section 1.1.1)
- Mention the types of finance. (See Subsection 1.1.1.1)
- What is direct finance? (See Subsection 1.1.1.1)
- What is indirect finance? (See Subsection 1.1.1.1)
- Indicate two differences between direct and indirect finance.
a. State the relevance of finance in an economic system. (See Subsection 1.1.1.1)
- What is a financial system consisted of?
a. What do you mean by deficit spending units or the surplus spending units in a financial system? (See Subsection 1.1.1.1)
- What is meant by financial intermediary? (See Subsection 1.1.1.1)
- What are the main components of any financial system? (See Subsection 1.1.1.1)
- What is meant by financial market? (See Subsection 1.1.1.1)
- What do you mean by financial instrument or asset? (See Subsection 1.1.1.1)
- Indicate any two functions of financial system in an economy. (See Subsection 1.1.1.1)
- What is meant by banking financial institution? (See Subsection 1.1.1.1)
- Indicate any functions of banking financial institution? (See Subsection 1.1.1.1)
- What is meant by non-banking financial institution? (See Subsection 1.1.1.1)
- Indicate any functions of non-banking financial institution. (See Subsection 1.1.1.1)
- Mention any two distinctions between banking and non-banking financial institutions.
a. Mention two types of financial institutions in India. (See Subsection 1.1.1.1)
- What is financial non-intermediary? (See Subsection 1.1.1.1)
- What are financial intermediary institutions? (See Subsection 1.1.1.1)
- Mention any two functions of financial non-intermediaries. (See Subsection 1.1.1.1)
- Indicate any two differences between financial intermediaries and non-intermediaries. (See Subsection 1.1.1.1)
- Mention any two differences between organised and unorganised financial institutions. (See Subsection 1.1.1.1)
- What are two prime factors behind the weakness of Indian financial system? (See Subsection 1.1.1.1)
- What is meant by financial markets? (See Subsection 1.1.1.1)

- What are the functions of financial market? (See Subsection 1.1.1.1)
- What are the principal types of financial markets? (See Subsection 1.1.1.1)
- What are the fundamental features of Indian financial markets? (See Subsection 1.1.1.1)
- What are the components of Indian financial market ecosystem? (See Subsection 1.1.1.1)
- What are the main reasons behind the regulation of financial markets? (See Subsection 1.1.1.1)
- What are the main players in Indian money market? (See Subsection 1.1.1.1)
- Give two examples of Development Finance Institutions (DFI) in India. (See Subsection 1.1.1.1)
- What is a money market? (See Subsection 1.1.1.1)
- What are the functions of the money market? (See Subsection 1.1.1.1)
- What are the components of Indian money market? (See Subsection 1.1.1.1)
- Indicate any two features of Indian money market. (See Subsection 1.1.1.1)
- Indicate three prime money market instruments.
a. What is meant by T-Bill? (See Subsection 1.1.1.1)
- Indicate any two features of T-Bill. (See Subsection 1.1.1.1)
- What do you mean by commercial paper? (See Subsection 1.1.1.1)
- Indicate any two features of commercial paper. (See Subsection 1.1.1.1)
- What do you mean by 'certificate of deposit'? (See Subsection 1.1.1.1)
- Indicate any two features of 'certificate of deposit'. (See Subsection 1.1.1.1)
- What is call money market? (See Subsection 1.1.1.1)
- Mention four main players of call money market. (See Subsection 1.1.1.1)
- Indicate two foremost features of call money market. (See Subsection 1.1.1.1)
- What are the two types of call rate as observed in Indian call money market? (See Subsection 1.1.1.1)
- What do you mean by inter-bank call rate? (See Subsection 1.1.1.1)
- What is meant by Repo rate? (See Subsection 1.1.1.1)
- What is meant by Reverse Repo? (See Subsection 1.1.1.1)
- Indicate two differences between Repo and Reverse Repo. (See Subsection 1.1.1.1)
- Mention the types of Repo windows prevalent in India. (See Subsection 1.1.1.1)
- What are the two main features of Repo? (See Subsection 1.1.1.1)
- What is meant by 'Participation Certificate' / 'Inter-Bank Participation'? (See Subsection 1.1.1.1)
- What is 'voluntary inter-banking' as introduced in India in 2007? (See Subsection 1.1.1.1)
- Indicate any two weaknesses of Indian money market. (See Subsection 1.1.1.1)
- What is meant by capital market? (See Subsection 1.1.1.1)
- Indicate any two roles of capital market. (See Subsection 1.1.1.1)
- What are components of Indian Capital Market? (See Subsection 1.1.1.1)
- Which of the financial markets deals mainly with long-term funds? (See Subsection 1.1.1.1)
- Mention any two features of Indian Capital Market. (See Subsection 1.1.1.1)
- What is primary capital market/new issue market? (See Subsection 1.1.1.1)
- Mention any two features of primary market. (See Subsection 1.1.1.1)
- What do you mean by secondary capital market/share market? (See Subsection 1.1.1.1)

57. Mention any two features of secondary capital market. (See Subsection 2.2.4)
58. What is the relation between the primary and secondary capital market? (See Subsection 2.2.4)
59. Indicate any two differences between primary and secondary capital market or Distinguish between the primary and secondary markets. (ICU, BA/BSc, BEd, Sem-V, 2018) (See Subsection 2.2.4)
60. Indicate any two factors contributing to the development of Indian capital market. (See Subsection 2.2.4)
61. Mention any two problems in Indian Capital Market or Mention two weaknesses of India's capital market. (ICU, BA/BSc, BEd, Sem-V, 2018) (See Subsection 2.2.4)
62. Highlight any two reforms as observed in Indian capital market. (See Subsection 2.2.4)
63. Indicate any two reform as observed in primary capital market in India. (See Subsection 2.2.4)
64. Indicate any two reform as observed in secondary capital market in India. (See Subsection 2.2.4)
65. What is meant by financial derivative? (See Subsection 2.3.1)
66. Mention the players in derivative market. (See Subsection 2.3.1)
67. Indicate any two points on the importance of derivative market. (See Subsection 2.3.1)
68. Indicate any two limitations of derivative market. (See Subsection 2.3.1)
69. Mention the four principal segments of derivative market. (See Subsections 2.3.1, 2.3.2, 2.3.3, 2.3.4)
70. State the broad types of financial derivatives as emergent in any financial system. (See Subsections 2.3.1, 2.3.2, 2.3.3, 2.3.4)
- or, What are financial derivatives? (ICU, BA/BSc, BEd, Sem-V, 2018)
71. What do you mean by forward contract? (See Subsection 2.3.1)
72. Indicate any two features of forward contract? (See Subsection 2.3.1)
73. What do you mean by future contract? (See Subsection 2.3.1)
74. Indicate any two features of future contract? (See Subsection 2.3.1)
75. Mention any two difference between forward and future contract. (See Subsection 2.3.1)
76. Indicate any two feature of 'Options'. (See Subsection 2.3.1)
77. What is meant by 'Call' option? (See Subsection 2.3.1)
78. What is meant by 'Put' option? (See Subsection 2.3.1)
79. Mention any two differences between 'Call' option and 'Put' option. (See Subsection 2.3.1)
80. Indicate any two difference between 'Futures' and 'Options'. (See Subsection 2.3.1)
81. What do you mean by currency swaps? (See Subsection 2.3.2)
82. What do you mean by interest swaps? (See Subsection 2.3.2)
83. What do you mean by debt-equity swaps? (See Subsection 2.3.2)
84. What is meant by credit derivatives? (See Subsection 2.3.2)
85. What do you mean commodity market as in the realm of financial system? (See Subsection 2.3.3)
86. What is meant by asymmetric information? (ICU, BA/BSc, BEd, Sem-V, 2018) (See Subsection 2.3.3)
87. State any two important functions of SEBI. (ICU, BA/BSc, BEd, Sem-V, 2018) (See Subsection 2.3.3)

Long-answer Type Questions

1. Write a short note on the 'Financial system' of a country. (See Section 2.1)
2. What are the important functions of the financial system? (See Subsection 2.1.1)
3. Briefly identify the contributions of the financial system to a country's economic development. (See Subsection 2.1.1)
4. Briefly discuss the role of financial system in the economic development of a country or Discuss the role of financial system in economic growth of a country. (See Subsections 2.1.1, 2.1.2)



5. Financial system performs co-ordination between savings and investment. — Comment. (See Subsection 2.1.2)
6. Financial assets are part of an investor's wealth, but not part of national wealth. — Explain. (See Subsection 2.1.10)
7. State the components of a financial system. (See Subsection 2.2.1)
8. Write a short note on : Financial Markets. (See Subsection 2.2.2)
9. Write short notes on : Direct Finance and Indirect Finance. (See Subsection 2.2.1)
10. Write a short note on indirect finance. (See Subsection 2.2.1)
11. State the functions of intermediary financial institutions. (See Subsection 2.2.1)
12. Briefly state the role of financial intermediaries in an economy. (ICU, BA/BSc, BEd, Sem-V, 2018)
13. Distinguish between Banking Intermediary Institutions and Non-banking intermediary institutions. (See Subsection 2.2.1)
14. Distinguish between organised financial market and unorganised financial market in Indian financial system. (See Subsection 2.3.1)
15. Distinguish between organised and unorganised financial markets. (See Subsection 2.3.1)
16. Distinguish between organised financial institutions and unorganised financial institutions in a financial system. (See Subsection 2.3.1)
17. Distinguish between financial intermediary institutions and financial non-intermediary institutions. (See Subsection 2.3.1)
18. What is meant by financial non-intermediary institutions? State the functions of these institutions. (See Subsection 2.3.1)
19. Classify the financial intermediary institutions. State their functions. (See Subsections 2.3.1, 2.3.2)
20. What are the weaknesses of the Indian financial system? (See Subsection 2.3.3)
21. Discuss the major changes in the Indian financial system since the early 1990s. (See Subsection 2.3.1)
22. Discuss the importance and role of financial markets. (ICU, BA/BSc, BEd, Sem-V, 2018)
23. What do you mean by (i) the deficit spending units, (ii) the surplus spending units, and (iii) the neutral spending units in any financial system? (See Subsection 2.3.1)
24. What is financial system? State the components of a financial system. (Subsections 2.1, 2.1.1)
25. What do you mean by money market? what are its components? (See Section 2.5 & Subsection 2.5.1)
26. State the functions of money market. (See Subsection 2.5.1)
27. What is money market. Discuss the functions of money market. (See Section 2.5 & Subsection 2.5.1) (ICU, BA/BSc, BEd, Sem-V, 2018)
28. Describe the characteristics of Indian money market. (See Subsection 2.5.1)
29. State the weakness or limitations or defects of Indian money market. (See Subsection 2.5.1)
30. Distinguish between Organised money market and Unorganised money market. (See Subsections 2.5.1 & 2.5.2)
31. Review the structure of Indian Money Market. (See Subsection 2.5.1)
32. Write a short note on : Money market mutual funds. (See Subsection 2.5.1)
33. What is Treasury Bill Market? State its features. (See Subsection 2.5.1)
34. State the functions of Treasury Bill market in India. (See Subsection 2.5.1)
35. Write a short note on : Commercial Paper. (See Subsection 2.5.1)
36. Distinguish between Repo and Reverse Repo. (See Subsection 2.5.1)
37. Define call money market. Who are the participants or players in the Indian call money market? (See Subsection 2.5.1)

43. What are the reasons for small size of Indian call money market?
 44. Discuss the nature of Indian call money market.
 45. What are the drawbacks of Indian call money market?
 46. Write a short note on: Repo and Reverse Repo.
 47. Discuss the recent trends in the Indian money market.
 48. What do you mean by Treasury Bills? Indicate the features of Treasury Bills.
 49. Distinguish between the Commercial Paper and Certificate Deposit as money market instruments.
 46. Make an evaluation of the growth of Indian money market.
 41. Discuss in brief the reforms in Indian money market during the last few decades.
 42. Explain the concept of capital market. State the salient characteristics of capital market.
 43. Explain the major distinctions between capital market and money market.
 44. Discuss the functions of capital market.
 45. State the importance of capital market.
 46. Discuss the significance of capital market.
 47. Discuss the features of Indian capital market.
 48. State the constituents of capital market. Briefly describe their features.
 49. Describe factors contributing to the growth of capital market in India.
 50. Discuss the recent developments of Indian capital market.
 51. (a) Explain the concept of asymmetric information.
 (b) What is meant by the problem of adverse selection? Explain. How this problem can affect the insurance?
 (c) Explain the concept of adverse selection in financial market with suitable example.
 (d) Explain the problem of moral hazard.
 (e) Give a brief account of adverse selection and moral hazard in the financial market with suitable examples.
 52. State the problems of Indian capital market.
 53. State the weaknesses of Indian capital market.
 54. Write a short note on: Capital Market Reforms.
 55. What do you mean by primary market or new issue market? State its features.
 56. Distinguish between the new issue market or primary market and stock market or secondary market.
 57. What do you mean by share market or secondary market or stock exchange? State its important features.
 58. Explain the relationship between the new issue market and stock exchange.
 59. Explain the relationship between the new issue market and the regulatory market.
 60. Discuss the factors which contribute towards the growth of Indian capital market.
 61. Discuss some of the recent developments of the Indian capital market.



62. Discuss in brief the reforms in Indian Capital market since 1991.
 63. What do you mean by financial derivatives? Explain with examples.
 64. What do you mean by derivatives? What are the common types of derivatives traded in financial market?
 65. State the role of financial derivatives in the financial market.
 66. Give a brief note on the participants in the derivative market.
 67. Mention some of the benefits and drawbacks of financial derivatives.
 68. Write short notes on (a) Forward Contract, (b) Future Contract.
 69. Distinguish between Forward Contract and Future Contract.
 70. What is an option in the derivative market?
 71. Discuss the features of this technique as well as its benefits.
 72. Distinguish between: (a) Call option and put option, (b) Futures and options.
 73. Give a brief note on (i) swaps and (ii) credit derivatives.
 74. Write a short note on commodity market.
 75. What are the advantages of Mutual Funds as investment for small savers?

(CU, BA/Bsc. (H), Sem-V, 2021)

(See Subsection 2.3.14.)

(See Section 2.7.)

(CU, BA/Bsc. (H), Sem-VI, 2021)

(See Subsection 2.7.2.)

(CU, BA/Bsc. (H), Sem-V, 2021)

(See Subsection 2.7.1.)

(See Subsection 2.7.1.)

(See Subsection 2.7.3.)

(See Subsection 2.7.3.)

(See Subsection 2.7.3.)

(See Subsection 2.7.3.)

(See Subsection 2.7.3.)

(See Subsection 2.7.3.)

(See Subsection 2.7.3.)

(CU, BA/Bsc. (H), Sem-VI, 2021)

(See Subsection 2.3.7(b).)



Interest Rate Structure

3.1. Introduction

Interest rate is supposed to be the price paid to the owners of capital for using the service of capital for a specific period. Several interest rates prevail in the financial market. The classical theory suggests that the equilibrium rate of interest is determined through the supply of and demand for capital in a competitive market. However, the liquidity preference theory of interest, as suggested by Keynes, emphasises on the role of both transaction demand and speculative demand for money in determining the aggregate demand for money. In this chapter, we shall discuss the topics such as gross interest and net interest, nominal and real interest rate, determinants of the term structure of interest rates, the reasons behind differences in interest rates, different theories regarding the term structure of interest rates and changes in interest rate structure in India.

3.2. Definition of Interest Rate

According to Prof. Marshall, "Interest is the price paid for the use of capital in any market". So, interest is the price or factor cost of capital. Interest is expressed as a percentage return on capital invested after allowing for risk of investment.

According to Prof. Keynes, "Interest is purely a monetary phenomenon".

3.2.1. Gross & Net Interest

Conceptually interest can be of two types — (i) Gross interest, and (ii) Net interest.

The price of capital which is paid to the provider or owner of capital for the use of his money for a specified period of time is called gross interest. Within the gross interest some items are also included with the price for using the capital such as insurance against risk, cost of management and return for bearing inconvenience. If these items are excluded from gross interest then the residue left is called net interest. Therefore, the net price paid for services rendered by capital is the net interest.

Components of gross interest are :

- Pure interest or net interest** : It is the actual amount paid for availing the services of capital.
- Insurance against risk** : Lenders confront with some risks of non-payment where the loan is not fully secured. Therefore, lender charges some extra amount relating to the risks involved for such possible default. It causes enhancement of interest costs.
- Cost of management** : The lender has to incur some expenditure for administering the loan conveniently. Such costs include processing costs, legal charges and other administrative costs.
- Payment for inconvenience** : The lender has also to face certain inconveniences which are usually of two types :
 - loan amount may not be refunded by the borrower at the appropriate time.
 - lender may have to raise loan from others and pay some amount of interest thereon.

So the lender seeks some compensation in the form of interest.

Thus, $\text{Gross Interest} = \text{Pure Interest} + (\text{Premium for risk} + \text{Payment for inconvenience} + \text{Cost of management})$.

3.2.2. Nominal & Real Interest Rate

Nominal Interest Rate is the contractual interest rate which is mentioned on the face of the securities or loan agreement (say, 9.5% per annum). It is the aggregate of real interest rate and expected rate of inflation.

So, $\text{Nominal Interest Rate} = \text{Real Interest Rate} + \text{Expected Inflation Rate}$.

Real Interest Rate is the inflation adjusted interest rate. If expected inflation rate is deducted from the nominal interest rate, then the resultant figure is known as real interest rate. The calculation of inflation rate is based on consumer price index (CPI). There is a negative correlation between inflation and real interest rate. That means when the rate of inflation increases, real interest decreases and vice-versa. When inflation rate increases gradually, the borrower is benefited but the lender suffers a loss.

For this reason, the lender charges higher interest rate in case of long-term loan, as due to higher inflation, real value of money would fall at the time of refund.

E.g., suppose nominal interest rate is 14% and average inflation is 8%, then the real interest rate will be $14\% - 8\% = 6\%$.

So, $\text{Real Interest Rate} = \text{Nominal Interest Rate} - \text{Expected Inflation Rate}$.

3.2.3. Differences between Gross and Net Interest Rate

Following are the points of differences between Gross Interest Rate and Net Interest Rate.

Points of differences	Gross Interest Rate	Net Interest Rate
(1) Definition	Gross interest is the price paid to the provider or owner of capital for the use of the capital for a specified period of time.	Net interest is the price paid to the provider or owner of capital for the services of capital only.
(2) Elements	Following are the elements of gross interest : (a) risk element (b) cost of management (c) payment for inconvenience	Risk element, cost of management and payment for inconvenience are not included in net interest.
(3) Rate of interest	The rate of gross interest is more than the net interest.	The rate of net interest is lower than the gross interest.
(4) Correlation	Net interest is a constituent of gross interest. So, gross interest is always influenced by net interest.	Net interest is included in gross interest.

3.2.4. Differences between Nominal and Real Interest Rate

Following are the points of distinction between Nominal Interest Rate and Real Interest Rate.

Nominal Interest Rate	Real Interest Rate
1. Nominal interest rate is that rate at which loan is raised from the finance market.	1. Actual return on investment (ROI) is known as Real interest rate.
2. Inflation cannot influence the nominal interest.	2. Variability of inflation rate influences the real interest.
3. This rate of interest remains transcribed on the security bond or on the loan agreement.	3. Real interest rate varies from time to time and it is not written on the security bond or on loan agreement.
4. Nominal rate of interest generally remains fixed or constant.	4. This rate remains variable with the trend of changes in inflationary conditions.
5. It always remains positive.	5. When the consumer price inflation becomes greater than the nominal interest rate, then this rate becomes negative.
6. There is no correlation between inflation and nominal interest.	6. There exists a negative correlation between real interest and inflation, i.e., when inflation rate rises then real interest decreases and vice versa.

3.2.5. Short-Term and Long-Term Interest Rate

Interest rate which is charged by the lender on the short-term loan or credit given to the borrower is known as short-term interest rate. Examples of short-term interest rates are bank rate, treasury bill rate, call money rate, commercial bill rate, bill discounting or hundi discounting rate, etc.

Interest rate which is charged on long-term loan or credit given to the borrower is known as long-term interest rate. Examples of long-term interest rates are : interest rate on term deposit with banks, interest on dated government securities, etc.

Relation between short-term and long-term interest rates :

Rate of interest on loan or credit depends on various factors, such as, liquidity, default risk, tenure of loan, etc. Liquidity of an investment is an important factor. Long-term loans are not easily recoverable. There is a time bound process for its recovery. On the other hand, short-term loans can be recovered by the lenders within a comparatively shorter time period. These remain more liquid. Due to inflation in the economy, value of money or purchasing power of money gradually decreases. Moreover, default risk increases in the case of long-term loans. Interest is charged by the lender at a higher rate on such loans. Default risk is also less in case of short-term loan. So, the lender charges a comparatively lower rate of interest on such loans.



3.2.6. Differences between Administered and Market Determined Interest rate

The main differences between administered interest rate or regulated interest rate and market determined interest rate are discussed below :

Points of distinction	Administered Interest Rate or Regulated Interest Rate	Market Determined Interest Rate
(i) Definition	Interest rate which is determined by the monetary authority of the country is called the administered or regulated interest rate.	Interest rate which is determined by the demand for and supply of money in the money market is known as the market determined interest rate.
(ii) Stability	This interest rate is sustained in the financial system for a long time period.	This rate changes very frequently.
(iii) Classification	It is classified as — (a) Interest rate on savings. (b) Interest rates on loans.	It may be classified as — (a) Interest rate on government credit. (b) Interest rate on other loans.
(iv) Assessment	The monetary authority determines the administered interest rate. In India, the RBI determines administered interest rates on different types of deposits.	It is determined by the market forces. Monetary authority does not have any role to play in determining this interest rate.
(v) Types	Administered interest rates are : (a) Interest rate on bank and post office. (b) Interest rate on corporate deposits. (c) Interest rate on treasury bills, etc.	Market determined interest rates are : (a) Interest on long-term government bonds. (b) Interest on call money rate, interest on debt of corporate sector, etc. (c) Short-term, medium-term and long-term interest rate.
(vi) Control	This rate in India is controlled by the Reserve Bank of India (RBI).	This rate in India is not controlled by the RBI. It is freely determined by the market forces.

3.2.7. Concepts of Call Rate, Yield Rate and Yield-to-Maturity

- (a) **Call Rate** : In the call money market, banks with surplus reserves lend to the banks with deficit reserves for a very short period (say, over night or up to 14 days). The interest rate charged in such lending is known as call rate. For example, Mumbai Inter-bank Offer Rate (MIBOR). The average daily turnover in call money market in India was about ₹ 14,170 crore in 1997-98 and it increased to about ₹ 1,13,195 crore in 2013-14. The average call rate in Mumbai call market varied between 7.16% to 17.73% during 1990-2002. This volatility has reduced in recent years with the deepening of the market, e.g. this rate varied between 6.5% to 8.8% during 2013-14.



Fig-1

- (b) **Yield rate on Treasury Bills** : A Treasury Bill (TB) or a Government security is a tradable instrument issued by the Central Government or the State Governments. It acknowledges the Government's debt obligation. Such securities may be short-term (usually called treasury bills, with original maturities of less than one year) or long-term (usually called Government bonds, of dated securities or G-Sec that carries a fixed/coupon rate or floating interest rate on face value with original maturity of one year or more) in nature. Treasury bills are zero coupon securities and pay no interest. They are issued at a discount and redeemed at the face value at maturity.

In India, the Central Government issues both treasury bills and bonds or dated securities while the State Governments issue only bonds or dated securities which are called as the State Development Loans (SDLs). The Government securities carry practically no risk of default and, hence, are called risk-free gilt-edged instruments.

Thus, the Treasury Bills (TBs) are short-term borrowing instruments used by the Government in India, the RBI issues TBs at a discount and the Yield Rate on Treasury Bill is calculated as follows (day count convention) :

Let the Face Value of the TB = ₹ 100, Issue Price = ₹ 95 ; So, Discount = ₹ 5 ; let the maturity period of a TB be 182 days.

Then yield (Y) on TB will be $Y = \frac{\text{Discount}}{\text{Issue Price}} \times \frac{365}{\text{Maturity Period}} \times 100$

$$Y = \frac{5}{95} \times \frac{365}{182} \times 100 = 10.6\%$$

Let the 91-days TB with face value of ₹ 100 is issued at a discount of ₹ 98. Then

$$Y = \frac{2}{98} \times \frac{365}{91} \times 100 = 8.16\% \text{ [Here, discount} = 100 - 98 = 2]$$

After, say, 41 days, if the same Treasury Bill is traded at a price of ₹ 99, the yield would then be

$$Y = \frac{1}{99} \times \frac{365}{50} \times 100 = 7.3\% \text{ [Here, maturity period} = 182 - (91 + 41) = 50]$$

- **Coupon Yield on TB** : This is the fixed return the Government (i.e., the issuer) commits to pay to the investor.

- **Current Yield on TB** : The current yield is simply the coupon payment as a percentage of the bond's purchase price; in other words, it is the return a holder of the bond gets against its purchase price which may be more or less than the face value or the par value.



$$\text{Current yield} = \frac{\text{Annual Coupon Rate(C)}}{\text{Purchase Price(P)}} \times 100$$

If $C = 10\%$ and $P = 80$ then Current Yield = $(10/80) \times 100 = 12.5\%$

Thus, when the bond is sold at a discount, then current yield becomes higher than coupon rate. Similarly, when the bond is sold at a premium, then current yield becomes lower than coupon rate.

- **Yield to Maturity (YTM)** : YTM is the expected rate of return on a bond if it is held until its maturity.

The price of a bond is simply the sum of the present values of all its remaining cash flows. Present value is calculated by discounting each cash flow at a particular rate, this rate is the YTM.

If C = Annual coupon payment,

N = Number of years to maturity,

B = Par value of the bond, and

P = Purchase price,

then YTM would imply the IRR or the Internal Rate of Return on that bond.

$$\text{Here, } P = \frac{C_1}{(1+r)} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_N}{(1+r)^N} + \frac{B}{(1+r)^N}$$

If $C_1 = C_2 = \dots = C_N = ₹ 70$, $B = ₹ 1000$, $P = ₹ 950$ and $N = 4$, then

$$950 = \frac{70}{(1+r)} + \frac{70}{(1+r)^2} + \frac{70}{(1+r)^3} + \frac{70}{(1+r)^4} + \frac{1000}{(1+r)^4} \text{ Here, } r = 8.5\%$$

This rate can be approximated as follows :

$$\begin{aligned} & (\text{current yield} + [\text{Total maturity period/period remaining for maturity}]) \\ & = \left(\frac{70}{950} \times 100 \right) + \frac{4}{3} = 7.3 + 1.3 = 8.6 \end{aligned}$$

- **The implicit yield** : The implicit yield is the yield on the TB if it is held till maturity (within 1 year). If a TB with face value of ₹ 100 is issued at ₹ 98 then the implicit yield will be calculated as follows (assuming that the coupon rate is paid quarterly i.e. 4 times in a year) :

$$\left[\left(\frac{100}{98} \times 100 \right) - 100 \right] \times 4 = 8.16\%$$

3.3. Theories of Interest Rate Determination

There are several theories that deal with the determination of equilibrium rate of interest in an economy. Here, we can discuss, in brief, the (i) Classical theory, (ii) Loanable fund theory,

(iii) Liquidity preference theory, and (iv) Hicks-Hansen general equilibrium theory.

3.3.1. Classical Theory

The Classical theory of interest rate was put forward by the economists such as Alfred Marshall, John Bowler, Nassau Senior etc. According to this theory, the real interest rate in a competitive market environment is determined through the free interplay of demand for and supply of capital.

The demand for capital is generated out of the marginal productivity of capital. Rise in total output (due to the additional employment of capital) is considered as the marginal product of capital (MP_K).

It is assumed that if the producer employs more and more of capital, other things remaining unchanged, then MP_K will gradually fall. In a competitive market, the producer has to sell the product at a given price (P). Thus, with more employment of capital (K), $P \cdot MP_K = VMP_K$ (value of

marginal product of capital will also fall. Generally, the producer would employ that amount of capital at which, the price of capital, i.e., real interest rate (r) becomes equal to VMP.



Fig. 2

VMP_K is falling. In Fig. 2, if $r = r_1$, then K_1 amount of capital will be employed. When r rises to r_2 , then the producer will employ lesser amount of capital, viz. K_2 . Thus, demand for capital falls with an increase in the price of capital. So, the downward sloping portion of the VMP_K curve can be considered as the demand curve for capital.

The supply of capital, on the other hand, depends upon (i) the postponement or abstinence of any individual from his or her present consumption, (ii) greater preference for the present period etc. Thus, if an income earner wants to save then he has to reduce his present

consumption. So, to induce an individual to abstain from his present consumption, some reward in the form of higher interest rate should be given. This abstinence theory was popularised by Norman Sidgwick.

Similarly, Classical economists like Bohm-Bawerk and Arving Fisher developed the 'time preference theory' regarding the supply of capital. They were of the view that future is uncertain and an individual generally prefers 'present consumption' more than the 'future consumption'. So, to make future consumption more attractive, these individuals should be paid a reward in terms of higher interest rate. So, these individuals can consume less and save more at present only if they get higher interest rate. Higher savings at present would mean higher supply of capital. Thus, there remains a positive correlation between the supply of capital and the interest rate. In Fig. 3, SS curve represents the aggregate supply of capital, and DD curve represents the aggregate demand for capital in an economy. The rate of interest at which supply of capital becomes equal to the demand for capital, is considered as the equilibrium rate of interest (r_0).

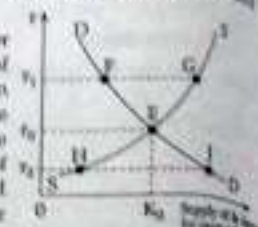


Fig. 3

If $r = r_1$, then there will be excess supply (FG) of capital. So, there will be a downward pressure upon the price of capital, i.e., r will fall. Similarly, if $r = r_2$, there will be an excess demand (HJ) for capital. So, competition among the borrowers would raise the market rate of interest. So, any departure from the equilibrium interest rate would create such forces that would bring the rate of interest back to its equilibrium value.

• Critical evaluation :

The Classical theory of interest rate has been criticised on several grounds.

- Savings may not be the only source of capital :** In this theory, savings have been considered as the only source of the supply of capital. But other sources such as bank loan and disinvestment were not emphasised in this theory.
- Existence of unused or underused resources has not been considered :** This theory considers that higher interest rate should be given to individuals to postpone their present consumption, and to save more. But if there remains unused or underutilised resources in the economy then that can be used for production purposes, and higher interest would not be needed to induce the individuals to postpone their present consumption.
- Interest rates may not be a real phenomena :** The Classical theory considers interest rate as a real phenomena. But according to J. M. Keynes, interest is a purely monetary phenomena. The monetary factors have been ignored in this theory.



Income as a determinant of savings has been ignored : The Classical theory assumes 'full employment', i.e., all the available resources are fully employed at any particular time, and aggregate output or real income cannot be increased any further. But Keynes suggested that underemployment equilibrium is also possible due to the lack of effective demand. Thus, higher income would also induce higher savings at present. This was ignored in the Classical theory.

3.3.2. Loanable Funds Theory

The loanable funds theory of the rate of interest was expounded by a group of Neo-Classical economists. It made its first appearance in the writings of Knut Wicksell and was later developed further by Lindahl, Myrdal, Ohlin and others. This is essentially a demand-supply theory. It says that the rate of interest, being the price of loanable funds, must be determined by the demand for and the supply of loanable funds, because the price of any good is determined by its demand and supply.

• **Demand for loanable funds :** Why do people demand loanable funds? In other words, why do people take loans? There can be various purposes.

- Investment :** The major purpose for taking loans is investment. A business firm takes loans in order to create its capital base. This capital is then combined with labour to produce output. The loan is repaid out of the sale proceeds. From the point of view of the firm, the interest payment is a cost of production. In this way, loans are utilised for productive purposes i.e., for the purpose of producing something.
- Dissaving :** Loans are also taken for the purpose of dissaving i.e., for being able to spend more than one's current income. This may be necessary for various reasons (for instance, medical emergencies or a temporary fund shortage). One way of dissaving is, of course, drawing on previous savings. For example, one may withdraw a fixed deposit in a bank before its maturity date. However, since this usually involves some losses, people usually prefer to take loans when a need for dissaving arises.
- Hoarding of commodities :** People also take loans for the purpose of hoarding. In most cases, people hoard some commodities. This is often the case where some commodities are expected to be in short supply in the near future and people want to build stocks of these commodities now in order to reap profits in the future. (Notice that here nothing is being produced. Hence, this type of demand for loans is to be distinguished from demand for loans for investment purposes.) In order to build up the stocks, people purchase these commodities now in large quantities and need loans to finance these purchases.
- Cash hoarding :** Paradoxically, people sometimes take loans just for hoarding the money in cash form. At first this may seem peculiar, because idle cash does not bring in any returns. However, in some cases, it is cash money which is expected to be in short supply in the future. (This happens, for instance, when a depression in the economy is expected shortly.)

Demand for loans falls when interest rate rises : Whatever the purpose for taking loans may be, the general feature of demand for loans is that it varies inversely with the rate of interest. The demand for any good or service will fall when its price rises. The same is the case with loanable funds. More loanable funds will be demanded at a smaller interest rate and vice versa.

• **Supply of loanable funds :** Let us now come to the supply of loanable funds. What are the sources of supply of loanable funds? The important sources are mentioned below :

- Savings :** Just as investment is the most important source of demand for loanable funds,



savings constitute the most important source of supply. Whenever an amount of money is saved, it is usually lent to somebody. For instance, if it is kept in the bank, that means that it has been lent to the bank.

- (ii) **Credit received from financial institutions** : Producers, however, seldom take loans directly from individuals. They take loans from financial institutions. Among these institutions, banks give short and medium-term loans. There are some specialised financial institutions which also give long-term loans.
- (iii) **Disinvestments** : Sometimes people disinvest i.e., they dispose off their investments. For instance, a producer may decide to stop production and sell off the machines in his factory. The money that is obtained in this way can be lent out. This too is, therefore, a source of loanable funds.
- (iv) **Dishoarding** : We should also mention dishoarding as a source of loanable funds. Suppose that a hoarder decides to dispose of his hoarded commodities. The money obtained in this way may be loaned out. However, in practice, it is dishoarding of money (rather than commodities) which is the more important source. People with extra-cash may decide to loan it out rather than letting it remain idle.

Supply of loanable funds rises when interest rises : The common feature of all the different sources of loanable funds is that the supply of loanable funds is higher when the rate of interest is higher. As in the case of every other good or service, here also supply varies directly with price.

■ **Determination of interest rate** : So far we have not said anything about the central question, how is the rate of interest determined? To answer this question, all we have to do is to bring the demand and the supply sides together. The rate of interest prevailing in the market will be that rate at which the demand for and the supply of loanable funds would be equal. This is explained in Fig-4.

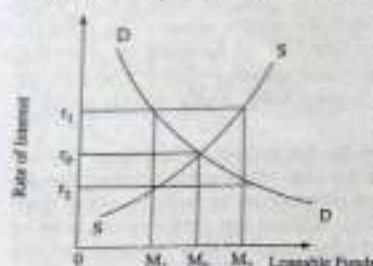


Fig-4

The DD curve in Fig-4 shows the total demand for loanable funds at various rates of interest. At any given rate of interest it shows the sum of the various types of demands (investment, hoarding of commodities, hoarding of money and dissaving) at that rate. The curve is downward sloping because as the rate of interest rises, all types of demand for loans (and, hence, the total demand for loans) fall. Similarly, the SS curve shows the total supply of loanable funds at various rates of interest. This curve is upward sloping because as the rate of interest rises, each type of supply of loanable funds rises. Hence, the total supply of loanable funds also rises with an increase in the interest rate.

The equilibrium rate of interest in the market will be r_0 , because it is only at this rate that the total demand and the total supply of loanable funds are equal. Both are equal to OM_0 . At any other level of the rate of interest, the rate will either tend to fall or tend to rise. For instance, at r_1 , the supply of loanable funds is OM_2 and the demand for loanable funds is OM_1 . Supply exceeds the demand in order to induce people to take loans, the lenders will reduce the rate of interest. Hence, the rate will tend to fall and cannot remain at r_1 . Similarly, if the rate of interest is at r_2 , there would be a shortage of loans in the market, since demand would exceed supply. The pressure of excess demand would now push up the rate of interest. Ultimately, the rate of interest settles down at r_0 . According to the loanable funds theory, this is how the rate of interest is determined.



Critical evaluation :

Despite the fact that the loanable funds theory adopts a broader point of view than the Classical theory, it has been criticised on several grounds.

- (1) **The influence of income on savings is ignored** : While the loanable funds theory correctly describes savings as a major source of supply of loanable funds, it ignores the fact that savings depend more on income than on the interest rate. As Keynes later explained, consumption and, therefore, savings were determined mostly by the level of income. But in the demand-supply diagram there is only the rate of interest on the vertical axis. In other words, the influence of income on savings and, hence, on the total supply of loanable funds are ignored.
- (2) **Other determinants of loanable funds may not remain unchanged** : It is true that, even when an economic variable depends on several determinants, we show only one of its determinants in the demand-supply diagram. Because, it is not possible to show everything in a single diagram. For instance, when we draw the demand curve for a commodity we measure only its price on the vertical axis although we know that demand depends not only on the price but also on other variables (for instance, prices of other commodities, income of the consumer, etc.). But this is done by assuming that the values of the other variables are fixed. When the price of this good falls, the diagram would show that the demand for the good rises. But this is valid only if the other determinants of demand remain unchanged. If they change, this need not be true. Therefore, the loanable funds diagram makes sense only if the other determinants of demand for and supply of loanable funds are unchanged. But such an assumption would be untenable. When the rate of interest changes, incomes of the citizens of the country would tend to change. It is not possible here to assume that the other determinants of demand and supply are unchanged.

- (3) **The influence of marginal efficiency of capital on investment is ignored** : Similarly, investment is determined not only by the rate of interest but also by certain other factors (for instance, the marginal efficiency of capital). These other influences on investment (and hence, on the total demand for loanable funds) have, again, been ignored in the loanable funds theory.
- (4) **Rate of interest is a monetary phenomenon** : The loanable funds theory also ignores the fact that the rate of interest is a monetary phenomenon i.e., it is related to the demand for and supply of money. There is no mention of monetary factors in the theory.
- (5) **Relationship between the bond prices and the rate of interest is ignored** : Finally, the rate of interest in any economy is related to the bond market. In fact, the interest rate bears a definite relationship to bond prices. These relationships have also been completely ignored in the loanable funds theory.

3.3.3. Liquidity Preference Theory

The liquidity preference theory of the rate of interest was expounded by J.M. Keynes in his book 'The General Theory of Employment, Interest and Money'. According to Keynes, the rate of interest is a monetary phenomenon. By this he meant that the rate of interest is the price of money. Hence, it is determined by the demand for and supply of money. Thus, this is also a demand-supply theory. But it is money (rather than capital or loanable funds) whose demand and supply we are talking about.

■ **Money supply and demand** : On the side of supply of money, this theory does not have anything novel to say. The money supply is determined by the monetary authorities i.e., the Government or the Central Bank. It does not depend on the rate of interest. In a diagram (Fig-5), therefore, when we measure the rate of interest on the vertical axis and money supply on the horizontal axis, the supply curve of money is just a vertical straight line. In Fig-5, the initial supply



■ **Total demand for money:** The total demand for money is simply the sum of the transaction demand for money (and which does not vary with the interest rate) and the speculative demand for money. This is shown in Fig-8. Since just a constant is added to the speculative demand for money, the general shape of the curve (L_{12}) is similar to the speculative demand curve i.e., it is again, a downward sloping curve with a lower limit on the rate of interest. However, compared to the speculative demand curve, the total demand curve for money lies further to the right from the origin.

■ **Determination of the equilibrium interest rate:** The equilibrium rate of interest is determined at the point of intersection of the supply curve of money and the total demand curve for money. In Fig-9, r_e is the equilibrium rate of interest and M_e is the equilibrium amount of money demanded and supplied. If the intersection of the demand and supply curves happens to be on the downward sloping portion of the demand curve (as shown in Fig-9), an increase in money supply will lower the interest rate because the vertical supply curve of money will shift rightward. Similarly, a decrease in money supply will shift the supply curve leftward. The equilibrium rate of interest will rise. However, if the intersection happens to fall on the horizontal portion of the demand curve (i.e., in case of liquidity trap), changes in money supply will not change the equilibrium rate of interest.

● **Criticism:** The liquidity preference theory makes clear the relationship between the interest rate on the one hand and both the bond market and the money market on the other. That is its strong point. Yet, the theory has been criticised on several grounds.

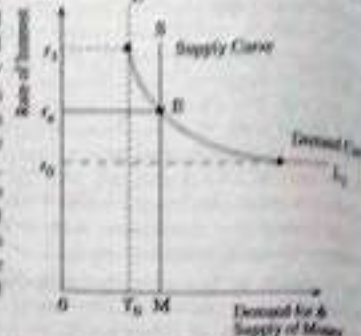


Fig-9

- Influence of loanable funds on the interest rate is ignored:** To the extent that it ignores the influence of the demand for and the supply of loanable funds on the rate of interest, it is incomplete.
- Not applicable in case of long-run analysis:** The monetary influences on the rate of interest operate in the short-run. Therefore, the liquidity preference theory is, at best, only a short-run theory of the determination of the interest rate. In the long-run, such factors as the productivity of capital become more important in this context.
- Interest is not always a monetary phenomenon:** We have seen that if the intersection between the demand curve and the supply curve of money is on the horizontal portion of the demand curve, changes in the supply of money do not have any effect on the rate of interest. Under these circumstances then, it becomes incorrect to say that the rate of interest is a monetary phenomenon.
- Assumes a given level of income:** This theory also assumes a given level of aggregate income to estimate the transaction and precautionary demand for money. So, without this assumption this theory cannot determine the equilibrium interest rate.



3.4. Hicks- Hansen's Theory of Interest Rate

In their general equilibrium theory, Hicks and Hansen have considered both money market and product market in determining the equilibrium interest rate. It is known as IS-LM approach. The IS function indicates such combinations of rate of interest (r) and national income (Y) which keep the product market at equilibrium.

In the product market, the aggregate demand for output depends on aggregate expenditure (E), where $E = C + I + G$.

Here, C = Consumption expenditure, and C depends on Y , i.e. $C = C(Y)$; I = Investment expenditure, and I depends on r , i.e. $I = I(r)$; and G = Government expenditure which is assumed to be given exogenously. So, the product market is at equilibrium when

$$Y = E$$

$$\text{or, } Y = C(Y) + I(r) + G$$

$$\text{or, } Y - C(Y) - G = I(r)$$

$$\text{or, } S(Y) = I(r) \dots (1)$$

Here, S = Aggregate savings that depends on Y . In equation (1), the combinations of Y and r which maintain this equilibrium can be presented with the help of an IS curve which is downward sloping. Here, it is assumed that S rises with a rise in Y ; but I falls with a rise in r . So, when Y rises, S will rise; and therefore I has to be raised to maintain product market equilibrium. Here, I rises when there is a fall in r . Hence, we get a negative correlation between r and Y ; and the IS curve becomes negatively sloped (Fig-10).

Again, in the money market, equilibrium is maintained when aggregate real supply of money (M/P) becomes equal to the aggregate demand for money. Based on Keynesian approach, this theory shows that aggregate demand for money consists of two parts: (i) Transaction demand for money, $L_1 = L_1(Y)$; and L_1 depends on Y ; (ii) Speculative demand for money, $L_2 = L_2(r)$; here L_2 depends on r . It is assumed that as Y rises, L_1 will rise; but L_2 falls with a rise in r . So, at money market equilibrium

$$\frac{M}{P} = L_1(Y) + L_2(r) \dots (2)$$

Here, it is assumed that $\frac{M}{P}$ is determined by the monetary authority of a country; and it is fixed by that authority.

In equation (2), different combinations of Y and r that keep the money market at equilibrium, can be presented with the help of the LM curve. Here, with a rise in Y , L_1 rises. So, L_2 should fall to maintain money market equilibrium. So, r should rise to induce a fall in L_2 . Thus, we get a positive correlation between Y and r as indicated by the positively sloped LM curve (Fig-11).

Now, the combinations of Y and r which keep both money market and product market at equilibrium, can be considered as the general equilibrium (Fig-12). In Fig-12, the general equilibrium situation has been shown by the point of intersection (E) between IS and LM curves. Thus, the equilibrium value of $r = r_e$ and $Y = Y_e$.

This theory is supposed to be better than either the Classical theory or the Keynesian theory of interest rate determination. The impact of fiscal policy (that causes a shift in the IS curve) or the impact of monetary policy (that causes a shift in the LM curve) on equilibrium values of r and Y can easily be shown with the help of this theory.



Fig-10

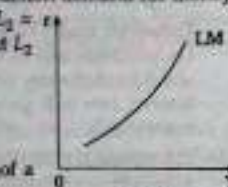


Fig-11

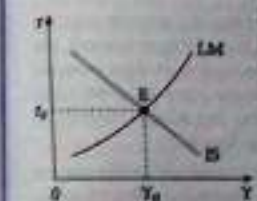


Fig-12



3.3.5. Can Interest Rate be zero?

In real life situation, interest rate can never become zero or negative. However, we can think of some theoretical possibilities where interest rate may become zero. These situations are indicated below:

- (a) **Absence of saving and investment in the economy**: If there are no savings and investments within an economy (or, if the supply of and demand for loanable funds are completely absent), then the rate of interest may be zero. This happens because in the absence of investment (or in the absence of any demand for capital) there is no question of paying any positive price (i.e., interest rate) for using the service of capital. Similarly, since there is no saving, it implies that the total income is always spent on consumption. Hence, it may be useless to maintain a positive price of capital to create the supply of capital through the generation of saving.
- (b) **Zero marginal productivity of capital**: According to the marginal productivity theory of distribution each factor is paid according to its marginal productivity. Hence, if the marginal productivity of capital is zero, then its price, i.e., the interest rate, might also be zero.

However, in the liquidity preference theory of interest, we see that at a low level of interest rate, the demand for money becomes completely interest-elastic, and it does not fall below that level. This has been termed as the situation of liquidity trap. Thus, interest rate cannot be zero.

3.3.6. Determinants of Interest Rate Structure

Determinants of the interest rate structure are:

- (1) **Default risk**: Interest rate remains directly correlated with default risk. Borrowers may fail to meet their obligations at the time of repayment of such loans. If the lender perceives that the default risk may be high, he charges higher interest to cover any potential loss arising from defaults. Long-term loans generally possess higher default risks. As a result, higher interest is charged on long-term loans.
- (2) **Inflation risk**: Where the inflationary condition persists, the real worth of money reduces. Uncertainties and risks increase with higher inflation. Nominal interest rate is ascertained by adding inflationary rate with real interest. If inflation is expected to increase in future, nominal interest rate will go up. For this reason, present and expected inflationary rates affect the interest rate.
- (3) **Transaction cost**: Lender has to bear some cost for realisation of principal and interest. This is known as transaction cost. Such cost for long-term loan is less than that of short-term loan. This cost increases as loan related transactions increase and it affects the interest rate structure.
- (4) **Liquidity risk**: Liquidity means the convenience with which an investment security can be marketed or converted into cash. Interest rate is inversely related with liquidity. If a security is easily convertible into cash interest on such security becomes lower. If its liquidity is low, interest on such security would be higher.
- (5) **Call risk**: Corporate sector bonds may be issued with a special rider that the issuing company will be able to call back the bond before maturity at an agreed value. When interest rate decreases in the economy, corporate bodies exercise this option. Then the bondholder is bound to earn only a limited amount of capital gains and has to reinvest his fund at lower yield. Moreover, he has to incur further transaction cost for investment. For that reason, interest on callable bonds would be higher than the interest rates of non-callable bonds.
- (6) **Capital risk**: It implies the variability of return on a security due to changes in the market interest rate. The investor may have to incur a loss in terms of lower return on a fixed interest bearing security due to a rise in market interest rate.



(7) **Tax**: The tax paid on earnings vary due to the changes in the interest rate. Different securities offer different tax exemptions on interest income and principal amount of investment. Such tax exemptions cause difference in interest rates. Generally the rate of tax on interest is higher than the rate of capital gains tax. Again, more rebates are available from income tax on investment in government securities. Interest rate is lower in these securities.

(8) **Mobility of capital**: Interest rate structure depends on mobility of capital. High rate of interest is charged where there is lack of mobility of capital.

(9) **General business condition of the country**: Interest rates largely depend on the economic situation prevailing in the country. In favourable economic situations, demand for capital for investment increases. In such a situation, interest rate increases. Again demand for capital reduces in dull economic situation. At this time interest rate falls.

(10) **Ineffective credit market**: If the credit market is not efficient and ineffective and there is a dearth of capital lending institutions, big credit lending institutions charge different rates of interest from different borrowers. Specifically in rural and remote areas high rate of interest is charged.

(11) **Government policy**: The Government of the country may take some policy to change low interest rate for priority sector lending and high rate of interest in other cases.

3.3.7. Causes of interest rate differential

Theoretically one can assume that there remains only one type of bond in the bond market and the supply-demand analysis can suggest how the equilibrium bond price would be determined and hence, only one equilibrium interest rate would exist in the bond market. However, in reality we find multiplicity of interest rates in the bond market. Now the question is why there exists such interest rate differential in the bond market.

Thus, we first try to understand why bonds with the same term to maturity have different interest rates. The relationship among these interest rates is called the risk structure of interest rates. However, the factors like risk, liquidity, and income tax rules all play a role in determining this risk structure.

Sources of interest rate differential:

(1) Default risk:

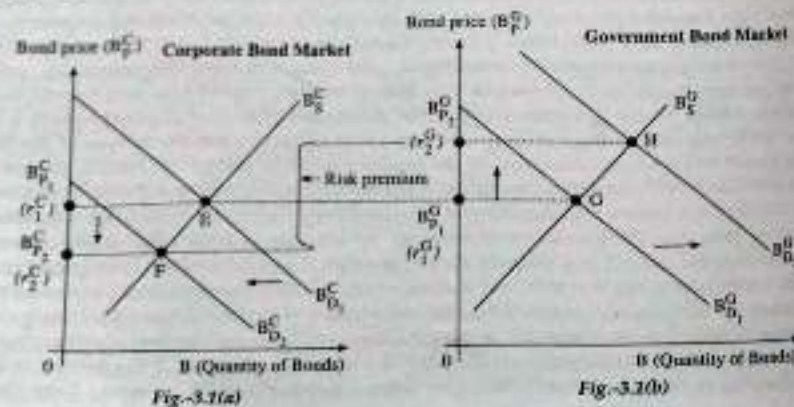
In explaining the risk structure of interest rates, we first take into account the default risk. The risk of default associated with a bond implies the case when the borrower or the issuer of the bond fails to repay the lender the principal amount along with promised interest payment at the maturity period. This default risk may vary from bond to bond. If a private corporate house faces sudden loss in its business then it might be incapable of meeting its fixed charges or fixed obligations, viz. paying the promised interest rate on the bonds issued by it. However, there might be no such default risk in case of the bonds issued by the government since the government (the Union government) is likely to have the advantage of printing currency notes and impose taxes upon the income of the people or upon the goods and services consumed by the people to meet its obligation. Hence, the government bonds or the treasury bills are often considered as the risk-free (viz. free from any default risk) securities. Thus, in the bond market we find that interest rates on different types of bonds differ from one another in any given year, and the spread (or difference) between the interest rates varies over time. For instance, during the period of economic recession when the private sector enterprises may suffer huge loss due to falling trend in their net business earnings then the default risk becomes higher for bonds issued by the private corporate houses as opposed to the bonds issued by the government. However, within the private corporate houses the degree of business loss may also vary from firm to firm. As a result, the probability of such default risk varies between firms. If the default risk is higher in case of any bond, the issuer must offer higher interest rate to attract the investors. Now, the distance



or the spread between the interest rates on bonds with default risk and default-free bonds, both of the same maturity, is called as the **risk premium**. It indicates how much additional interest investors must earn to be willing to hold a risky bond.

In the absence of any default risk the equilibrium price of private corporate bond (B_P^C) and that of a government bond (B_P^G) would be equal. As a result, the equilibrium interest rate on private corporate bond (r_P^C) will be equal to that on government bond (r_P^G). In that case, the interest rate spread, i.e. [r_P^C] - [r_P^G] will be zero. However, in the presence of default risk where the private corporate houses often fail to pay the promised interest on corporate bonds at maturity date, the expected return on these bonds will fall. In addition, the returns on corporate bonds would become more uncertain. Thus, other things remaining same, the investors would find it less profitable to hold corporate bonds and would prefer to hold more of government bonds. As a result, in the corporate bond market, the demand for these bonds will fall causing a leftward shift in its demand schedule [Fig.-3.1(a)] and therefore, given the supply schedule of corporate bonds, the equilibrium price of corporate bond will fall from $B_{P_1}^C$ to $B_{P_2}^C$. As we know that $B_P^C = \frac{1}{r_P^C}$ so, a fall in B_P^C would mean

a rise in equilibrium interest rate on private corporate bond (r_P^C), say, from r_1^C to r_2^C . On the other hand, in the government bond market, given its supply schedule, the demand schedule would shift to the right implying an increase in the demand for risk-free government bonds. As a result, the equilibrium price of government bond will rise from $B_{P_1}^G$ to $B_{P_2}^G$. As we know that $B_P^G = \frac{1}{r_P^G}$ so, a rise in B_P^G would mean a fall in the equilibrium interest rate on government bond (r_P^G) say, from r_1^G to r_2^G [Fig.-3.1(b)]. Hence, we get an interest rate spread in the form of a risk premium where risk premium = interest rate spread = ($r_2^C - r_2^G$) where ($r_2^C > r_2^G$) [Fig.-3.1(a) & (b)]. In Fig.-3.1(a) & (b), the equilibrium interest rate corresponding to any equilibrium bond price has been indicated within the parentheses.



the analysis clearly shows that interest rate differential in the bond market can arise because of the differences in default risk across the bonds in the bond market. We can also conclude that a bond with default risk will always have a positive risk premium, and an increase in its default risk will raise the risk premium. The investors can gauge this default risk associated with any private corporate bond on the basis of the credit rating for any bond (normally a bond with high credit rating would mean lower default risk) done by the credit rating agencies (say, by CRISIL or ICRA in case of India).

Liquidity of bonds: The liquidity of a bond implies how quickly a bond can be converted into cash, i.e. how quickly the bond can be sold in secondary bond market. If the corporate bond market is shallow in nature, i.e. only few corporate bonds are traded in the bond market then it would be difficult for any bond holder to sell the bond in the secondary market. It implies that the liquidity of the corporate bond will be less. On the other hand, if the government bonds can easily be transacted in the secondary bond market then these bonds would be more liquid compared to the corporate bonds. As a result, other things remaining the same, the demand for corporate bonds will fall causing a leftward shift in the demand schedule for corporate bonds. So, given the supply schedule of corporate bonds, the equilibrium price of corporate bond will fall from $B_{P_1}^C$ to $B_{P_2}^C$ [Fig.-1(a)]. As we know that $B_P^C = \frac{1}{r_P^C}$ so, a fall in B_P^C would mean a rise in

equilibrium interest rate on private corporate bond (r_P^C), say, from r_1^C to r_2^C [Fig.-1(a)]. On the other hand, as the government bonds are more liquid, the investors would be inclined to hold more of government bonds. So, in the government bond market, given its supply schedule, the demand schedule would shift to the right implying an increase in the demand for more liquid government bonds. As a result, the equilibrium price of government bond will rise from $B_{P_1}^G$ to $B_{P_2}^G$. As we know that $B_P^G = \frac{1}{r_P^G}$ so, a rise in B_P^G would mean a fall in the equilibrium interest rate on government bond (r_P^G) say, from r_1^G to r_2^G [Fig.-1(b)]. Hence, in this case also we get an interest rate spread to the extent of ($r_2^C - r_2^G$) where $r_2^C > r_2^G$ [Fig.-1(a) & (b)].

Here, spread between the interest rates will increase. Therefore, the differences between interest rates on corporate bonds and government bonds (that is, the risk premium) reflect not only the default risk of corporate bonds but also its low liquidity. This is why a risk premium is more accurately considered as a 'risk and liquidity premium'.

(d) Tax savings: Some of the bonds issued particularly by the public sector enterprises (or the government) are tax-free bonds since the bondholders are not required to pay any tax on the interest income from these bonds. Tax-free bonds come with a long-term maturity period of 10, 15, and 20 years. The major issuers of tax-free bonds in India are Housing Development Corporation (HUDCO), Power Finance Corporation, Indian Railway Finance Corporation (IRFC), National Highway Authority of India (NHAI) etc.

Examples of tax free bonds in India:

Tax-free bonds	Interest rate	Frequency of interest payment	Maturity
HUDCO N2 Series	8.2%	March every year	March 2027
HUDCO N5 Series	7.51%	Feb every year	Feb 2028
IRFC N9 Series	8.48%	Feb every year	Feb 2024
IRFC NA series	8.65%	Feb every year	Feb 2029



As opposed to tax free bonds issued mostly by public sector organizations in India, the private sector organizations often issue tax savings bonds. Tax-saving bonds enjoy special privileges under Section 80 CCF of the Income Tax Act of India which states that individuals enjoy tax deductions up to ₹ 20,000 on the bonds owned by them. This means that an investor in these bonds can reduce his/her taxable income by ₹ 20,000 in a year, thereby saving on the overall tax liability of the income tax payer. This deduction is in addition to the tax deduction to the extent of ₹ 1.5 lakh provided under Section 80C of the Act. For example, the infrastructure bonds issued by the ICICI Bank, HDFC Bank etc are eligible for such tax savings.

Let us suppose a situation where the investor has the opportunity to purchase both tax savings bonds issued by the private corporate houses and the tax free bonds issued by the government or public sector organizations. Let us also suppose that the face value and purchase price (with maturity period) of these two types of bonds are same. However, the coupon payment (fixed interest rate payment) in case of corporate tax savings bonds is 8% per annum whereas the coupon payment for government tax free bonds is only 3% per annum. Since in the latter case, the entire interest income is tax free, investors might be more interested in purchasing tax-free bonds. As a result, given all other factors, the demand for government bond will increase in the bond market leading to a rightward shift in the demand schedule for government bonds. As a result, the equilibrium price of government bonds will rise (and hence equilibrium interest on government bond will fall). On the other hand, given all other factors, the demand for corporate tax savings bonds will fall and given its supply schedule, the demand schedule will shift to the left. Hence, the equilibrium price of the corporate tax saving bonds will fall and hence, equilibrium interest rate on these bonds will rise. This explains why tax-free government bonds carry lower interest rate compared to the tax savings bonds issued by the private corporate houses.

3.4. Term Structure of Interest Rate

The term structure of interest rate implies that the interest rate charged for lending money or the interest rate paid for borrowing money would depend on the length of time for which the money is being lent out or borrowed. For example, when an investor is willing to keep a deposit with a bank, then the interest income or the return that he expects from the principal amount depends upon the time for which he invests the money, say, 8% interest rate p.a. for 1-year term deposit, 9% interest rate p.a. for 2-year term deposit, 10% interest rate p.a. for 3-year term deposit etc.

When we calculate the present value of a 3-year bond having a face value of ₹ 1,000, carrying a coupon rate of 8% payable annually, and redeemable at par, we normally use the current market expectation of, say, 10% return p.a. as discount rate. Thus, we get the following present value (PV) of this bond:

$$PV = \frac{80}{(1+0.10)} + \frac{80}{(1+0.10)^2} + \frac{1080}{(1+0.10)^3}$$

$$= 72.73 + 66.12 + 811.42$$

$$= ₹ 950.27$$

Thus, the present value of the series of future cash flows from a bond (including coupon payments and redemption value) implies the sum of discounted value of that future income stream.

However, instead of using the uniform discount rate, we can use different expected returns as discount rates for cash-flows at different points of time. In that case, we get the following result:

$$PV = \frac{80}{(1+0.08)} + \frac{80}{(1+0.09)^2} + \frac{1080}{(1+0.1)^3}$$

$$= 74.07 + 67.33 + 811.42$$

$$= ₹ 952.82$$

Thus, when we estimate the present value or the current bond price at ₹ 950.27 then the single discount rate or yield rate of 10% would reflect an average yield rate or return over a period of 3 years. However,

when we emphasise on the term structure of the yield rate, then the present price of the 3-year bond becomes higher.

The yield structure according to the term of investment can be referred to as the term structure of interest rates. The variation of yield rates across bonds can be explained to some extent by the differences in the quality of the bonds in question. The quality of bond is often judged by the credit rating for these bonds. A bond with higher credit rating (say, AAA*) is likely to be sold at a higher price and hence it will have lower yield rate. On the other hand, a bond with identical promised cash-flow may have a lower credit rating (say, B*) and, therefore, this bond may be sold at a lower price at present, and, hence, this bond will have a higher yield rate.

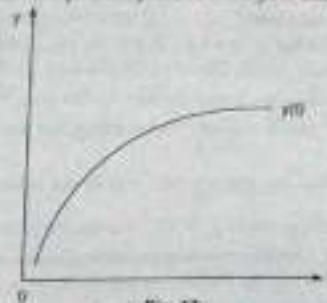


Fig-13

In a similar way, the maturity period of bonds can also explain

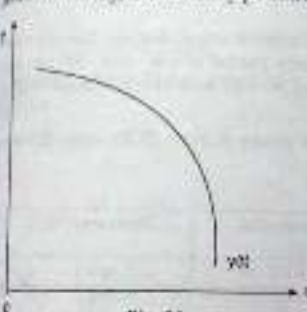


Fig-14

the differences in their yield rates. Generally a bond with longer maturity period tends to offer higher yield rate compared to a bond with short maturity period. Hence, yield rate (Y) becomes a function of the maturity period (t), i.e., $Y = f(t)$ where $f'(t) > 0$ i.e., as t rises, Y also rises and vice versa. This functional relation is depicted by a yield curve.

Thus, we get an upward sloping yield curve (Fig-13). However, the theory related to the term structure of interest rates suggests that the yield curve may take some other shapes also (i.e., it can be either downward sloping or horizontal) depending upon the market conditions and the expectations of the investors. If bonds with longer maturity have lower yield rates then we get an inverted yield curve (Fig-14). In this case,

- 13. bonds with short maturity give more return and the investors believe that such increase in yield rate during short-run is a temporary phenomenon, and in near future the yield rate will fall.
- 14. For proper understanding of the theory of the term structure of interest rates, we are to be acquainted with the notions of spot rate and forward interest rate.

3.4.1. Spot Interest Rate

A spot rate of interest can be defined as the basic interest rate p.a. charged on any amount of money held during any particular period. It is measured at any given point of time as the yield to maturity (YTM) on a pure discount bond (or a zero coupon bond (ZCB)) and can be considered as the interest rate associated with a spot contract. The discount rate at which the present value of future cash flows from a bond is just equal to the present market price of the bond, is considered as the yield to maturity (YTM) on that bond.

In order to eliminate the influence of default risk, it is better to consider a government treasury bill for this purpose. Since the ZCB promises to pay a fixed amount at a fixed date in future, so the ratio of redemption value to the current price of the bond would imply the spot rate for the maturity date.

Such a spot contract involves immediate lending of an amount of money from the lender to the borrower. This loan amount along with the agreed interest rate (viz. the spot rate) has to be repaid by the borrower at a specific time in future. Thus, if an amount 'W' is lent out for 1 year, and the spot rate is s_1 , then after one year, $W(1+s_1)$ amount has to be repaid by the borrower. Similarly, s_2 would denote



2-year spot rate (i.e., an interest of s_2 p.a. for 2 years) on lending an amount 'A' for which the borrower would repay $A(1 + s_2)^2$ after 2 years. Hence, for the lender, the money lent out for 2 years grows by a factor of $(1 + s_2)^2$. It is to be noted that the definition of spot rate implicitly assumes a compounded interest rate. However, this compounding can be yearly or bi-annually or quarterly etc.

- **Yearly Compounding** : In this case, the money lent out at a spot rate of s_1 grows by a factor $(1 + s_1)^t$.
- **Multi-period compounding in a year** : If the compounding takes place for m periods within a year

then the money lent out at the spot rate s_1 grows by a factor $\left(1 + \frac{s_1}{m}\right)^{mt}$. Hence, for bi-annual compounding, $m = 2$; for quarterly compounding, $m = 4$ etc.

- **Continuous compounding in a year** : If the compounding is done continuously within a year then the money lent out at the spot rate s_1 grows by a factor $e^{s_1 t}$.

However, among all these compounding processes, the yearly compounding appears to be more convenient.

For Zero Coupon Bonds (ZCB), the yield rate and the spot rate of interest are analogous. We can show that for such ZCBs, the spot rate normally rises with the maturity period of the bond. We can also show that the spot rate with multi-period compounding (say, $m = 2$) and yearly compounding ($m = 1$) would be different.

Let us consider a ZCB with a face value of ₹ 100. The current prices of such ZCBs with different maturity periods with associated spot rates are shown below :

Table - 1

Current price of the bond (₹)	Maturity period (Year)	Spot rate (%) $m = 2$	Spot rate (%) $m = 1$
98.50	1	1.52	1.52
94.10	3	2.04	2.04
84.00	5	3.52	3.54
58.20	10	5.49	5.56
38.50	15	6.46	6.57
16.25	25	7.40	7.34

Here, given the current price of the ZCB, the spot rate has been estimated using the following formula:

$$P = \frac{F}{\left(1 + \frac{YTM}{m}\right)^{mt}} = \frac{F}{\left(1 + \frac{s_1}{m}\right)^{mt}} \quad (1)$$

Where P = Current bond price

F = Face value of the bond

YTM = Yield to maturity

s_1 = Spot rate at the time period t

m = frequency of compounding in a year

t = maturity period.

For instance, in case 15 year ZCB,

$$P = 38.50, F = 100, t = 15; \text{ if } m = 2$$



then the s_2 will be estimated as :

$$38.50 = \frac{100}{\left(1 + \frac{s_2}{2}\right)^{2 \times 15}}$$

$$\Rightarrow \left(1 + \frac{s_2}{2}\right)^{30} = \frac{100}{38.50}$$

$$\Rightarrow \left(1 + \frac{s_2}{2}\right) = \left(\frac{100}{38.50}\right)^{\frac{1}{30}}$$

$$\Rightarrow s_2 = \left[\left(\frac{100}{38.50}\right)^{\frac{1}{30}} - 1\right] \times 2$$

$$= 0.06459 = 6.46\%$$

(However, other things remaining the same, if $m = 1$ then the spot rate in this case will be as follows)

$$38.50 = \frac{100}{(1 + s_1)^{15}}$$

$$\Rightarrow (1 + s_1)^{15} = \frac{100}{38.50}$$

$$\Rightarrow s_1 = \left(\frac{100}{38.50}\right)^{\frac{1}{15}} - 1$$

$$= 0.0657$$

$$= 6.57\%$$

This example reveals that we must have a discount factor to estimate the spot rate. It is also observed that for ZCB, the yield rate and spot rate schedule will be synonymous. Here, the yield curve or the spot curve will be upward sloping (as already shown in Fig-13).

3.4.2. Discount Factor

Our previous discussion clearly indicates that when the spot rate has to be estimated then the corresponding discount factor (d_t) for each time period has to be determined so that the present value of the future cash-flows from a bond can be estimated.

In case yearly compounding, this discount factor would be $d_t = \frac{1}{(1 + s_1)^t}$, and for multi-period

compounding, it will be $d_t = \frac{1}{\left(1 + \frac{s_1}{m}\right)^{mt}}$. However, in case of continuous compounding, $d_t = e^{-s_1 t}$.

For any given cash-flow stream $x_0, x_1, x_2, \dots, x_n$, the present value (PV) will be $PV = x_0 + d_1 x_1 + d_2 x_2 + \dots + d_n x_n$.

$$\text{Here, } d_0 = \frac{1}{(1 + s_0)^0} = 1$$



Here, d_t resembles the price for cash received at time period t . Thus, the present value signifies the aggregate value of multiplied by the quantity (of cash-flow) for different points of time.

3.4.3. Forward Interest Rate

Forward interest rates denote the interest rates to be paid by the borrower to the lender on the amount borrowed in between two time periods in future based on the terms agreed upon at present.

We can explain it with the help of a simple example. Suppose that the spot interest rates s_1 and s_2 are known, and if ₹ 1 is invested for 2 years then it would grow by a factor $(1 + s_2)^2$ at the end of 2 years. This can be treated as maturity strategy or direct investment strategy. Alternatively one may invest ₹ 1 for 1 year at the spot rate s_1 and then reinvest the maturity value in the next year at the then prevailing rate (denoted by $f_{1,2}$, i.e., forward rate between year 1 and 2 or, the interest rate on money lent out in period 1 and receipt of principal alongwith interest in period-2). This strategy can be considered as the roll-over investment strategy.

In case of direct investment strategy, we have

$$₹ 1(1 + s_2)^2 \text{ after 2 years.}$$

However, in case of roll-over strategy,

We have ₹ $(1 + s_1)(1 + f_{1,2})$ after 2 years.

Under conditions of perfect certainty and prudent investors, the direct and roll-over strategies must provide same outcome.

$$\therefore (1 + s_2)^2 = (1 + s_1)(1 + f_{1,2})$$

$$\text{or, } (1 + f_{1,2}) = \frac{(1 + s_2)^2}{1 + s_1}$$

$$\text{or, } f_{1,2} = \frac{(1 + s_2)^2}{(1 + s_1)} - 1 \quad \text{..... (2)}$$

Example

Consider the following spot rates and calculate the forward rate ($f_{1,2}$).

Let $s_1 = 9\%$ and $s_2 = 10\%$

So, the direct strategy would result in

$$(1 + s_2)^2 = (1 + 0.1)^2 = 1.21$$

However, in case of roll-over strategy we get

$$(1 + 0.09)(1 + f_{1,2}) = 1.09(1 + f_{1,2})$$

So, under conditions of perfect information we must have

$$(1 + 0.10)^2 = (1 + 0.09)(1 + f_{1,2})$$

$$\text{or, } 1.21 = 1.09(1 + f_{1,2})$$

$$\text{or, } f_{1,2} = \frac{1.21}{1.09} - 1$$

$$= 1.11 - 1 = 0.11, \text{ i.e., } 11\%$$

Hence, the forward rate ($f_{1,2}$), in this case, is determined by two spot rates.

Generalised rule:

In our previous discussion, we were concerned with only two spot rates [as shown in formula (2)]. Now, it can be generalised. The forward rate between times t_1 and t_2 ($t_1 < t_2$) can be denoted by f_{t_1,t_2} and

it is the interest rate charged for borrowing money at time t_1 which has to be repaid with interest at time period t_2 . Normally, such forward rates are expressed on an annualised basis. From theoretical view point, the forward rate is based on the underlying spot rates (here s_1 and s_2). Hence, the calculations of forward rates are often termed as 'implied forward rate' as opposed to market forward rate. This implied forward rate between the time period i and j ($i < j$) with yearly compounding of interest rate is expressed as:

$$(1 + s_j)^j = (1 + s_i)^i (1 + f_{i,j})^{j-i}$$

$$\text{or, } f_{i,j} = \left[\frac{(1 + s_j)^j}{(1 + s_i)^i} \right]^{\frac{1}{j-i}} - 1 \quad \text{..... (3)}$$

If there is multi-period compounding within a year (with frequency of compounding p.a. = m) then (3) will be expressed as:

$$\left(1 + \frac{s_j}{m}\right)^{mj} = \left(1 + \frac{s_i}{m}\right)^{mi} \left(1 + \frac{f_{i,j}}{m}\right)^{m(j-i)}$$

$$\text{or, } \left(1 + \frac{f_{i,j}}{m}\right)^j = \left(1 + \frac{s_i}{m}\right)^i \left(1 + \frac{f_{i,j}}{m}\right)^{(j-i)}$$

$$\text{or, } \left(1 + \frac{f_{i,j}}{m}\right)^{(j-i)} = \frac{\left(1 + \frac{s_j}{m}\right)^j}{\left(1 + \frac{s_i}{m}\right)^i}$$

$$\text{or, } \left(1 + \frac{f_{i,j}}{m}\right) = \left[\frac{\left(1 + \frac{s_j}{m}\right)^j}{\left(1 + \frac{s_i}{m}\right)^i} \right]^{\frac{1}{(j-i)}}$$

$$\text{or, } \frac{m + f_{i,j}}{m} = \left[\frac{\left(1 + \frac{s_j}{m}\right)^j}{\left(1 + \frac{s_i}{m}\right)^i} \right]^{\frac{1}{(j-i)}}$$

$$\text{or, } f_{i,j} = m \left[\frac{\left(1 + \frac{s_j}{m}\right)^j}{\left(1 + \frac{s_i}{m}\right)^i} \right]^{\frac{1}{(j-i)}} - m \quad \text{..... (4)}$$



• Rule of arbitrage:

The equality $(1 + s_1)^2 = (1 + s_1)(1 + f_{1,2})$ that we observe in equation (2) can be justified with the help of arbitrage principle.

Here, if $(1 + s_1)(1 + f_{1,2}) > (1 + s_2)^2$

Then the roll-over strategy of investment gives more return compared to direct investment strategy. So, an arbitrageur can borrow for 2 years and lend the same by following the roll-over strategy. Hence, the profit earned by an arbitrageur would be

$$(1 + s_1)(1 + f_{1,2}) - (1 + s_2)^2 > 0$$

The capital investment made by the arbitrageur would be nil since his original borrowed amount would be recovered along with some profit. If this process continues then greater borrowing pressure would raise s_1 and gradually the positive gap between $(1 + s_1)(1 + f_{1,2})$ and $(1 + s_2)^2$ will be eliminated. Similarly, if $(1 + s_1)(1 + f_{1,2}) - (1 + s_2)^2 < 0$ then the arbitrageur will reverse his investment strategy and ultimately the equality in return from direct strategy and roll-over strategy will be attained.

However, this arbitrage process assumes that there remains no transaction cost (say, in the form of brokerage fees) in this investment, and the lending and borrowing rates are equal.

3.5. Theories on Term Structure of Interest Rate

The term structure of interest rates refer to the relationship between interest rates on short-term and long-term loans when all investment features (such as default risk, liquidity risk etc.) except the maturity period of the loan are held constant. It shows a functional relation between yield to maturity and the maturity period of the financial claim.

Several theories have been developed to explain the term structure of interest rates. These are:

- The Expectation Theory,
- The Liquidity Premium Theory,
- The Market Segmentation Theory, and
- The Preferred Habitat Theory.

3.5.1. Expectation Theory

This theory explains the differences in interest rates in the financial market on the basis of the expectation of the investors regarding short-term and long-term interest rates.

This theory is based on some assumptions as mentioned below:

- The financial markets are perfectly competitive.
- The investors are rational, i.e., they want to maximise the yield on their holding period (i.e., the period for which they want to hold the security).
- The investors have a perfect foresight and they have uniform expectations regarding both changes in interest rates and security prices.
- There remains no transaction cost in holding or trading in securities.
- Securities of different maturities are perfect substitutes for each other.

Now, an investor is supposed to have two investment options before him, viz.

- He can purchase long-term bonds with a maturity period of 'N' years, or
- He can purchase short-term bonds of 1 year maturity period upto (N-1) period.

Let us assume that the interest rate on long-term bonds, with a maturity period of 'N' years, is r . Now, if the investor invests a sum of ₹ P to purchase this long-term bond then at the end of the (N)



period, he will receive

$$V_1 = P(1 + r)^N \quad (i)$$

However, if he invests the same amount in purchasing short-term bonds with 1 year maturity period for (N-1) years, then he will receive

$$V_2 = P(1 + r_1)(1 + r_2^e)(1 + r_3^e) \dots (1 + r_{N-1}^e) \quad (ii)$$

Let r_1 = Current interest rate on 1 year bond.

r_t^e = Expected interest rate on 1 year bond at the t^{th} period or year.

Now, the decision of the investor regarding the purchase of short-term or long-term bonds will depend upon his expectation, i.e., whether V_1 is greater than, or equal to, or less than V_2 .

If $V_1 > V_2$ then the investor will purchase more of long-term bonds. So, there will be an excess demand for long-term bonds. As a result, the price of long-term bonds will rise, i.e. r will fall (since, bond price = $\frac{1}{r}$).

So V_1 will fall, and this process will continue until $V_1 = V_2$.

Similarly, if $V_1 < V_2$ then the investor will purchase more of short-term bonds leading to an excess demand for short-term bonds. So, the prices of short-term bonds will rise. Thus, r_1^e will fall, and hence, V_2 will fall until $V_1 = V_2$.

So at equilibrium, we have $V_1 = V_2$

$$= P(1 + r)^N = P(1 + r_1)(1 + r_2^e)(1 + r_3^e) \dots (1 + r_{N-1}^e)$$

$$= (1 + r)^N = (1 + r_1)(1 + r_2^e)(1 + r_3^e) \dots (1 + r_{N-1}^e)$$

$$= [(1 + r)^N]^{\frac{1}{N}} = [(1 + r_1)(1 + r_2^e)(1 + r_3^e) \dots (1 + r_{N-1}^e)]^{\frac{1}{N}}$$

$$= (1 + r) = \sqrt[N]{(1 + r_1)(1 + r_2^e)(1 + r_3^e) \dots (1 + r_{N-1}^e)}$$

$$= r = \sqrt[N]{(1 + r_1)(1 + r_2^e)(1 + r_3^e) \dots (1 + r_{N-1}^e)} - 1$$

So, this theory shows that the long-term interest rate (r) is an unbiased average (geometric mean) of the current and future expected short-term interest rates.

If the investor expects the future short-term interest rates to be higher than the current short-term interest rate then $r > r_1$. In this case, the yield curve that shows the relation between the maturity period of the bond and the interest rate at the time period t , will be upward rising (see Fig-13).

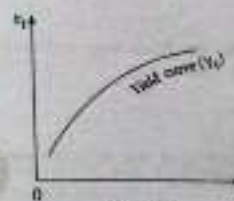


Fig-15

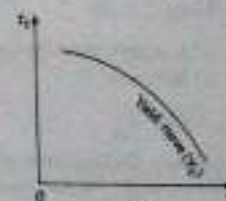


Fig-16



Similarly, if the investor expects that the future short-term interest rates will fall, i.e., $r_1^e > r_2^e > r_3^e \dots > r_{N-1}^e$, then $r < r_1$. In that case, the yield curve will be downward sloping (Fig. 16). However, if the investor expects no change in the future rates of interest, i.e., r

$$r_1 = r_2^e = r_3^e = \dots = r_{N-1}^e, \text{ then}$$

$$r = \sqrt[N]{(1+r_1)^N} - 1 = (1+r_1) - 1 = r_1$$

In this case, the yield curve will be horizontal (Fig. 15).

• Criticism: This theory has some drawbacks

- This theory is based on some restrictive assumption most of which have no practical relevance.
- This theory cannot explain the term structure of interest rates in the informal or unorganised segment of the financial market.
- This theory explains the process of determining long-term interest rate but it does not explain how the short-term interest rates are being determined.
- This theory also ignores the risks involved in investment.
- This theory shows how expectations can be derived from the observed yield curve, but it does not show how the yield curve can be constructed on the basis of expectation.

3.5.2. Liquidity Premium Theory

The liquidity premium theory of interest rate structure, as developed by J. R. Hicks, is based upon the preference pattern of the investors regarding short-term and long-term securities. This theory asserts that the investors usually prefer short-term fixed-income securities over long-term securities. It is assumed that the risk of holding long-term securities, which is often measured in terms of the variance of return on capital, is comparatively more than that of short-term securities.

The intuitive logic is that the investors prefer their funds to be liquid rather than tied up or locked for longer period. It is argued that the investors may require funds (or cash) before the maturity date of the security held. Thus, if any investor holds long-term bonds and needs to sell it before maturity date, then that would entail more 'price risk' or 'interest rate risk' since the bond price may fall substantially at the time the investor wants to sell it.

Hence, the borrower of the long-term fund or the issuer of long-term bonds must offer some premium (in the form of greater expected return) to the investors to induce them for buying long-term securities. Thus, while the unbiased expectation theory suggests the equality between the forward rate ($f_{1,2}$) and expected spot rate in the next period ($s_{1,2}^e$) the liquidity premium theory suggests that

$$f_{1,2} = s_{1,2}^e + L_{1,2} \dots (9)$$

where $L_{1,2}$ = Liquidity premium for the period starting one year from now and ending two years from now.

$$\therefore L_{1,2} = f_{1,2} - s_{1,2}^e$$

Thus, the difference between forward rate and expected future spot rate is considered as liquidity premium. Therefore, for a 2-year investment period we should have:

$$(1+r_2)^2 = (1+r_1)(1+s_{1,2}^e + L_{1,2}) \dots (10)$$

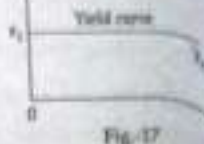


Fig. 17

where $L_{1,2} > 0$ and therefore, according to liquidity premium theory

$$(1+r_2)^2 > (1+r_1)(1+s_{1,2}^e) \dots (7)$$

This result implies that higher is the maturity period of a bond, higher should be the liquidity premium, and this explains the upward sloping yield curve or spot rate curve. In (7), it is assumed that $s_2 > s_1$. However, if we assume that $s_1 > s_2$ then the inequality as shown in (7) will hold only if the expected spot rate $s_{1,2}^e$ remains sufficiently lower than the current one-year spot rate (s_1). In this case, the yield curve will be downward sloping.

Example

Let the current 1-year spot rate be $s_1 = 8\%$, 2-year spot rate be $s_2 = 8.52\%$ and the 1-year forward rate be based on s_1 and s_2 , $f_{1,2} = 9.04\%$.

The unbiased expectation theory suggests that $f_{1,2} = s_{1,2}^e = 9.04\%$ but the liquidity premium theory suggests that $f_{1,2} > s_{1,2}^e$ when $s_2 > s_1$. The gap $(f_{1,2} - s_{1,2}^e)$ will indicate the liquidity premium.

Hence, $s_{1,2}^e$ should be less than 9.04%, say, $s_{1,2}^e = 8.6\%$. It implies that $9.04 - 8.6 = 0.44\%$ = liquidity premium.

$$\text{or } (1+s_2)^2 = (1+0.0852)^2 = ₹ 1.1776$$

$$\text{and } (1+s_1)(1+s_{1,2}^e) = (1+0.08)(1+0.086) = ₹ 1.1729$$

That is to say,

$$(1+s_2)^2 > (1+s_1)(1+s_{1,2}^e)$$

$$\text{or } ₹ 1.1776 > ₹ 1.1729$$

Here, higher return in case of investment in long-term (2-year bond) security can be attributed to a reward for taking greater price-risk.

However,

$$(1+s_2)^2 = (1+s_1)(1+s_{1,2}^e + L_{1,2})$$

$$(1+0.0852)^2 = (1+0.08)(1+0.0904)$$

$$= ₹ 1.1776$$

$$\therefore s_{1,2}^e + L_{1,2} = 8.6 + 0.44$$

$$= 9.04\%$$

$$= 0.0904$$

Thus, the investors should be given a liquidity premium so as to induce them to undertake risky long-term investment.

Example

Let us consider a case where $s_1 = 8\%$, $s_2 = 6\%$ and the 1-year forward rate (based on s_1 and s_2) $f_{1,2} = 4.04\%$.

(You can check that $f_{1,2} = \frac{(1+s_2)^2}{(1+s_1)} - 1$)

If the liquidity premium $L_{1,2} = 0.44\%$ then what should be the expected spot rate $s_{1,2}^e$?

Here, Since $s_1 > s_2$, so the liquidity premium theory suggests that the following inequality must hold [as shown in (2.31)]:

$$(1+s_2)^2 > (1+s_1)(1+s_{1,2}^e)$$

Thus, $s_{1,2}^e$ should be substantial lower than s_1 . Now, based on s_1 and s_2 ,

$$\begin{aligned} f_{1,2} &= \frac{(1+0.06)^2}{(1+0.08)} - 1 \\ &= \frac{1.1236}{1.08} - 1 \\ &= 0.0404 = 4.04\% \end{aligned}$$

As the liquidity premium $L_{1,2} = 0.44\%$

$$\therefore s_{1,2}^e = f_{1,2} - L_{1,2} = 4.04 - 0.44 = 3.6\%$$

Hence, we have $(1+s_1)(1+s_{1,2}^e) = (1+0.08)(1+0.036) = ₹ 1.1189$

$$\text{and } (1+s_2)^2 = (1+0.06)^2 = ₹ 1.1236$$

$$\therefore ₹ 1.1189 < ₹ 1.1236$$

Hence, the yield curve will be downward sloping since the 1-year spot rate is expected to decline in future.

Now, if we assume that $s_1 = s_2$ then the term structure becomes flat, i.e., the yield curve becomes horizontal (as shown in Fig.-17).

It is to be noted that in case of unbiased expectation theory such horizontal yield curve suggests that expected interest rates in the market remains unaltered. But according to the liquidity premium theory

despite $s_1 = s_2$, the desired inequality as shown in equation (2.31) would be maintained only if $s_{1,2}^e$ remains less than s_1 .

Example

Let $s_1 = s_2 = 8\%$. If the liquidity premium is assumed as 0.44% then what should be expected spot rate $s_{1,2}^e$ according to the liquidity premium theory?

Here, the forward rate $f_{1,2}$ based on the two spot rates s_1 and s_2 would be equal to the spot rate because

$$f_{1,2} = \frac{(1+s_2)^2}{(1+s_1)} - 1 = \frac{(1+0.08)^2}{(1+0.08)} - 1$$

$$= \frac{1.1664}{1.08} - 1$$

$$= 1.08 - 1 = 0.08 \text{ or } 8\%$$

hence, to maintain the inequality

$$(1+s_2)^2 > (1+s_1)(1+s_{1,2}^e)$$

$$\text{and } s_{1,2}^e < f_{1,2}$$

if the liquidity premium is assumed to be 0.44% then

$$s_{1,2}^e = f_{1,2} - L_{1,2} = 0.08 - 0.0044$$

$$= 0.0756$$

$$= 7.56\%$$

$$\therefore (1+s_2)^2 = (1.08)^2 = ₹ 1.1664$$

$$\text{and } (1+s_1)(1+s_{1,2}^e) = (1.08)(1.0756)$$

$$= ₹ 1.1616$$

• **Criticisms :** This theory, however, has been criticised on the following grounds :

- In the context of discussing the term structure of interest rates, the term liquidity premium is not a correct nomenclature. This is because liquidity premium is required to induce the investor to take higher risks. It is not paid for parting with liquidity (i.e., premium and interest rate are not the same thing).
- It is also doubtful whether the investors are really more averse to capital risk compared to income risk. Empirical evidence suggests that long-term securities are subject to more systematic risks arising out of government tax policies, inflation etc.
- The theory is not also very clear in indicating the origin of the change in the value of the principal amount, i.e., whether it is due to a change in the price level, or it is due to a change in the expected interest rates.
- This theory assumes that the risk premium is always positive and it will be increasing. It implies a positively sloped yield curve. But the yield curve may be downward sloping or horizontal.

3.5.3. Market Segmentation Theory

One of the important theories in determining the term structure of interest rates is the market segmentation theory. It was developed by Culbertson. This theory assumes that the investors are risk-averse, i.e., they want to minimise the risk involved in purchasing securities of different maturities.

This theory states that the capital market is divided into a number of segments. Broadly there are two segments in the capital market :

- The short-term security market,
- The long-term security market.

Here, it is assumed that the short-term securities are imperfect substitutes of long-term securities. The way to minimise risk is to match maturities with holding periods. Let us consider the investment decision of the Life Insurance Corporation of India (LIC). It collects insurance premiums from



individuals with an average age of 25-30 years. It is expected that the payment obligations for LIC will arise within next 20 years (depending upon the average life expectancy at birth). So, LIC invests in long-term securities with a maturity period of, say, 20 years. Similarly, some other organisations or individuals can invest in short-term securities to meet short-term obligations.

In each segment of the capital market, we have both demand for and supply of securities. The short-term equilibrium interest rate is determined through the interaction between the supply-demand forces of short-term securities. Similarly, the long-term equilibrium interest rate is determined through the demand and supply forces in the long-term securities market (Fig. 18).

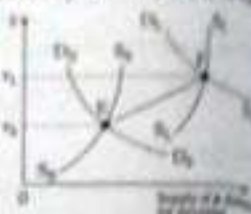


Fig. 18

In Fig. 18, both the demand for and supply of long-term securities are found to be higher than those of short-term securities. However, the demand for long-term securities (D_3) is found to be much higher than the demand for short-term securities (D_1). So, despite a higher supply of long-term securities (S_4) in comparison with that of short-term securities (S_1), the equilibrium interest rate in the long-term securities market (r_2) is found to be higher than that in the short-term securities market (r_1).

Now, joining the equilibrium points E and F, we can determine the yield curve. It is to be noted that the equilibrium interest on long-term securities may even be less than that on short-term securities depending on demand supply situations.

● **Critical Estimation** : This theory emphasises on the risk minimising behaviour of an investor. But in reality, the investors are not only guided by the motivation of risk aversion but also by the motivation of maximisation of return.

3.5.4. Preferred Habitat Theory

This theory can be treated as the moderate and realistic version of the market segmentation theory. According to this theory the investors can be grouped according to their preferred areas of operation, i.e., a group of investors and borrowers might be risk-averse and hence, they want to deal with only the less risky segment of the securities market. For instance, these investors would be more inclined to invest their fund in either risk-free government bonds or in the corporate bonds issued by the reputed corporate houses. So their preferred habitat would be 'low-risk low-return bonds'. Similarly, there may be another group of investors who are 'risk-lovers' and their preferred habitat would be 'high-risk high-return bonds'. Hence, an investor would be ready to leave his preferred habitat of securities market only if the other segment of the securities market offer significantly high rate of interest on capital invested. Hence, the term structure of interest rates according to this theory would also be determined by higher risk premium with an expectation of rising spot rates in future. However, in this case, the increase in expected spot rate does not necessarily have a positive correlation with the maturity period of the security, rather it is guided by the requirement of extra yield rate to induce the investors and borrowers to shift from one preferred habitat to the other in the securities market.

3.6. Interest Rate Structure in India and Recent Developments

During the pre-reform period, the interest rate structure in India was very much regulated by the monetary authority. The objectives of such regulated interest structure were :

- To put a ceiling upon the market rate of interest which has a tendency to rise at a high level due to excess demand for capital in a growing economy.
- To reduce the fluctuations in interest rate that create an uncertainty for both the borrowers and lenders in the market.
- To ensure adequate flow of fund to different sectors of the economy at a low cost (i.e., the firms could get credit facilities at a lower or subsidised interest rate).

to keep the deposit rates in alignment with the lending rates of commercial banks.

Thus, the varying interest rates in India in the organised segment of the financial markets are determined by two particular forces :

- the monetary policy of the RBI, and
- the interaction between the demand for and supply of investible funds in the financial system.

● **the Pre-reform Period**, i.e., before 1991, the policy operations of the RBI influenced the rate structure of India in the following ways :

- By changing the Treasury Bill rate,
- By changing the Bank rate,
- By fixing the maximum and minimum lending rates of commercial banks,
- By affecting call money rates through changes in the reserve requirements of the commercial banks,
- By influencing yields on government securities through open market operations (i.e., through purchase and sales of government securities).

● **Post-reform Period** : After the initiation of financial sector reforms in the early 1990s, various steps were initiated to deregulate the lending rates of commercial banks. The administered interest rates were reduced to three slabs in April 1993 :

- Advances upto ₹ 25,000 ;
- Advances more than ₹ 25,000 and upto ₹ 2 lakhs,
- Advances more than ₹ 2 lakhs.

In October 1997, banks were given the freedom to announce separate prime bank lending rates (PLR) for term loans of 3 years and above. The prime lending rate (PLR) remained applicable to the loans taken for working capital and short-term purposes. The PLR was applicable for providing credit facilities to the most creditworthy customers. It was lower than the normal lending rates. To align with international practice and provide further flexibility to commercial banks in deciding their lending rates, the RBI relaxed the requirement of PLR being the floor rate for loans above ₹ 2 lakhs. Thus, banks were allowed to offer loans at below-PLR (BPLR) rates to exporters and other creditworthy borrowers since April 2001. However, it was observed that a large portion of the total credit provided by the commercial banks went to the corporate sector at BPLR, but higher interest rates were charged on the small and medium enterprises. So, this system lacked transparency.

There was another problem, transmission of policy rates was inadequate, i.e., even when the RBI raised or reduced the 'repo' rates (to check inflationary or deflationary situations), commercial banks did not adequately revise their deposit and lending rates in accordance with changes in 'repo' or 'reverse repo' rates. To overcome this problem, the RBI decided to implement the 'Base' rate system with effect from July 2010.

The base rate is that minimum rate below which the banks are not allowed to lend. Banks were given the freedom to determine their base rates (provided the RBI found it consistent.) In most of the public sector banks, the base rate varied between 9.3 to 9.7%.

However, since April 2016, the RBI has introduced a new methodology of fixing the lending rates by commercial banks. It is known as Marginal Cost of Funds based Lending Rate (MCLR). As per the new guidelines, banks have to set five benchmark rates for different tenure or time periods ranging from overnight rates to 1 year rate. According to this method, the banks will fix the lending rates on the basis of the latest costs of obtaining funds (say, from deposits and through borrowing from the RBI). Thus, the deposit rates as well as the 'repo' rates would influence the lending rates of the banks.



Table - 3

Changes in repo & reverse repo rates during 2000-2015

Time	Repo Rate %	Time	Reverse Repo Rate %
26 Oct-2005	6.25	April, 2005	5
24 Jan-2006	6.5	01 Oct-2005	5.25
08 Jun-2006	6.75	24 Jan-2006	5.5
25 Jul-2006	7	08 Jun-2006	5.75
30 Oct-2006	7.25	25 Jul-2006	6
31 Jan-2007	7.5	08 Dec-2008	5
30 Mar-2007	7.75	05 Jan-2009	4
12 Jun-2008	8	06 Mar-2009	3.5
25 Jun-2008	8.5	21 Apr-2009	3.25
30 Jul-2008	9	19 Mar-2010	3.5
20 Oct-2008	8	26 Apr-2010	3.75
3 Nov-2008	7.5	02 Jul-2010	4
8 Dec-2008	6.5	27 Jul-2010	4.5
5 Jan-2009	5.5	16 Sep-2010	5
5 Mar-2009	5	02 Nov-2010	5.25
21 Apr-2009	4.75	25 Jan-2011	5.5
19 Mar-2010	5	17 Mar-2011	5.75
20 Apr-2010	5.25	03 May-2011	6.25
02 Jul-2010	5.5	16 Jun-2011	6.5
27 Jul-2010	5.75	26 Jul-2011	7
16 Sep-2010	6	16 Sep-2011	7.25
02 Nov-2010	6.25	25 Oct-2011	7.5
28 Jan-2011	6.5	17 Apr-2012	7
17 Mar-2011	6.75	29 Jan-2013	6.75
03 May-2011	7.25	19 Mar-2013	6.5
16 Jun-2011	7.5	03 May-2013	6.25
26 Jul-2011	8	20 Sep-2013	6.5
16 Sep-2011	8.25	29 Oct-2013	6.75
25 Oct-2011	8.5	28 Jan-2014	7
17 Apr-2012	8	18 Jan-2015	6.75
29 Jan-2013	7.75	04 Mar-2015	6.5
19 Mar-2013	7.5	02 Jun-2015	6.25
03 May-2013	7.25	September-2015	5.75
20 Sep-2013	7.5		
29 Oct-2013	7.75		
18 Dec-2013	7.75		
28 Jan-2014	8		
15 Jan-2015	7.75		
04 Mar-2015	7.5		
02 Jun-2015	7.25		
September-2015	6.75		

Source : Reserve Bank of India

Table - 1 and Fig. 19 & 20 shows that the RBI has changed its policy rates, viz., the repo and reverse repo rates to check either inflationary or deflationary situations in India over the last few years. These changes affect the cost of borrowing funds by the commercial banks. It is expected that under the present MCLR system, the lending rates of the commercial banks would respond quickly to such changes in official rates.



Fig-19



Fig-20

The process of deregulation on deposit interest rates in commercial banks had begun in 1980s. In April 1985, banks were allowed to set interest rates for maturities between 15 days and upto 1 year, subject to a ceiling of 8 per cent. This mechanism was withdrawn in May 1985 due to a price-war among the banks. However, the process of deregulation was resumed in April 1992 when the existing maturity-wise prescription were replaced by a single ceiling rate of 13 per cent for all deposits above 46 days. The ceiling rate was brought down to 10 per cent in November 1994, but was raised to 12 per cent in October 1995, which was further relaxed to maturity of over 1 year in July 1996. The ceiling rate for deposits of '30 days upto 1 year' was linked to the Bank Rate in April 1997. However, in October 1997, deposit rates were fully deregulated by removing the linkage to



Bank Rate: The RBI gave the freedom to commercial banks to fix their own interest rates on domestic term deposits of various maturities with prior approval from their respective Board of Directors or Asset Liability Management Committee.

The interest rate on savings deposit was also deregulated by the RBI with effect from October 2011. Thus, the commercial banks get the freedom to fix the interest rate on savings deposit also. After this announcement, 3 private sector banks raised the interest rate on savings account to 6% per annum for balances upto ₹ 1 lakh.)

Table - 3
Structure of Interest Rates in India

Year	Call Rate	Deposit Rates*				Lending Rate*
		Savings deposit	Term deposits			
			1-3 Years	3-5 Years	Above 5 Years	
1970-71	6.38	—	6.0-6.5	7.0	7.25	—
1980-81	7.12	—	7.5-8.5	10.0	10.0	13.5-15.4
1990-91	15.85	—	9.0-10.0	11.0	11.0	16.0
2000-01	9.15	4.0	8.5-9.0	9.5-10.0	9.5-10.0	11.0-11.5
2004-05	4.65	3.5	5.25-5.75	5.75-6.25	6.25	10.25-11.0
2010-11	5.50	3.5	8.25-9.0	8.25-8.75	8.5-8.75	9.25-9.5
2011-12	8.22	4.0	9.25	9.0-9.25	8.5-9.25	10.0-10.25
2014-15	7.97	4.0	8.5-8.75	8.5-8.75	8.25-8.5	10.0-10.25

Source : RBI (Statistical Handbook of India, different issues)

*The deposit & lending rates relate particularly to public sector commercial banks in India

The government of India has further reduced the administered interest rate applicable for small savings schemes in India since 1 April, 2016. The objective has been to reduce the burden of interest payments (e.g., interest rates on Post Office Savings Schemes, Public Provident Fund, Senior Citizen Savings Scheme, etc. have been slashed).

In our country, interest rate deregulation had started from 1985, based on the recommendations of Sukhamoy Chakraborty Committee. This committee identified few inconveniences in administrative control of interest rate. The committee strongly recommended for modification of administered interest rate system in order to remove the deficiencies. The committee had proposed that the ceiling on interest rates on bank loans and call loans should be removed. It was also recommended that the interest rates on treasury bills, government securities, bank deposits, etc. should be appropriately enhanced.

During the past 25 years, the government of India adopted the following important changes in its policy in order to deregulate the interest rate structure :

- (1) Interest rates on most of the money market instruments have been deregulated.
- (2) The ceiling on the call rate has been withdrawn.
- (3) The deposits rates and lending rates of commercial banks and cooperative banks have been deregulated.
- (4) The interest rates on treasury bills, certificate of deposits, and commercial papers are allowed to be flexible and market determined.
- (5) Interest rate on public deposits raised by all non-banking companies have completely been deregulated.

The interest rates on all types of debentures have been deregulated and made free.

The coupon rates on government securities have been made market related.

Recently the RBI puts more emphasis on flexible interest rates on deposits and lendings.

3.6.1. Impact of Globalization on Interest Rate Structure in India

The effects or impacts of globalization on interest rates in India are discussed below :

- (1) **More availability of capital :** A significant portion of Indian financial market is still unorganised. The administered or regulated interest rates have remained changing to some extent. Since the globalization policy was accepted in 1991, the sphere of financial market began to spread over different countries of the world. For that reason, availability of capital increased in the Indian economy.
- (2) **Impetus in investment :** Foreign financial institutions are providing credit to Indian entrepreneurs. So, investment in industries across various sectors have increased. Corporate organisations can raise capital from abroad by issuing foreign currency convertible bonds (FCCBs) and through other type of loans.
- (3) **Market forces have become important determinants :** Previously the interest rates in India were regulated or administered by the monetary authority. However, in the era of financial globalization, interest rates are being determined through market forces of supply of and demand for capital.
- (4) **Curtailement of benefits to retired people :** Reduction of interest rate on deposits has badly affected the retired and aged people who depend mostly on the interest earned from their limited savings.
- (5) **Scam and unethical practices :** Sometimes higher and lucrative interest rates are provided by chit funds and collective investment schemes in India. These are not reliable and many people are being cheated by keeping money in these schemes. Scams are perpetrated by the operators of these schemes.
- (6) **Increased profitability :** Entrepreneurs are now paying lesser interest on their borrowed capital than before. As a result, profitability on their investments increases.
- (7) **Instability in interest rates :** Due to stiff competition among banks and other financial institutions, interest rates on deposits and loans fluctuate very frequently.
- (8) **Tendency towards convergence :** Since capital is allowed to flow between nations almost freely, so there has been a tendency towards the convergence of interest rates prevailing in the global capital market and in the Indian Capital market.



Summary

In the language of Economics, interest rate is fundamentally interpreted as the return (expressed in percentage terms) accruing to the owners of capital, as one of the factors of production. In other words, interest rate signifies the price or cost per unit value of capital invested in any production activities.

According to the early thinkers (like, Alfred Marshall, Bohm-Bawerk, Nassau Senior) representing the Classical school of thought, in particular, interest rate is a real phenomenon in as much as it derives from the marginal product of capital, which is expressed in terms of the final output of the production process. Besides, interest rate can be viewed as the reward to abstinence from present consumption required to form savings which is in turn rented as capital to the firms, (vide, Irving Fisher's notion of intertemporal choice). In other words, interest rate should be determined at level where it can duly compensate the loss in utility owing to the sacrifice of current consumption. Therefore, to this end, interest rate can be interpreted as the opportunity cost of present consumption. Thus, in the light of Fisher's notion interest rate



determination should be in line with the rate at which an individual is willing to substitute between present for future consumption at the margin. On the other side, the Neo-Classical theory explains interest rate as the price of loanable funds as determined through the interplay between market forces of demand and supply.

However, according to Keynes, interest rate is typically a monetary phenomenon in as much as

(i) money is store of value, henceforth an asset where people can hold their savings, (ii) money is free from risk in value unlike other assets forms, like bonds, share etc. Hence money is relatively preferred more by those who are averse to risk. In other words, demand money holding is influenced by rate of return from other risky assets (which is what the interest rate is proxy of) and thereof, varies (inversely) with the change in interest rate. Now, the equilibrium interest rate is determined at the level where the corresponding planned demand for money is exactly equal to a given amount of money supply and thus, turn out to be monetary phenomenon.

A bond is a fixed income security. It creates an obligation on the part of the issuer of the bond to pay a given rate of interest on the face value of the bond to the bond holder. These bonds can be short-term or long-term bonds depending upon their maturity period. These bonds can be issued either at a premium or at a discount. The given interest rate per period offered by the issuer of the bond, viz., the borrower of fund, is called as coupon rate. At the time of maturity, the bond can be redeemed either at par or at a premium or at a discount with reference to its par value.

There can be various types of such bonds, e.g., the government Treasury Bills, dated government securities, floating rate bonds, zero coupon bonds, deep discount bonds, indexed bonds, callable bonds etc. However, an annuity contract cannot be considered as a security since it cannot be traded in the security market. The discount rate (r) at which the present value (PV) of the future cash-flow stream generated from the bond is just equal to the current bond price (B_0) can be considered as the yield rate of the bond. This cash-flow stream includes an initial cash outflow for the purchase of the bond, and the subsequent cash inflows in the form of coupon payments (C_k) and redemption value received at the time of maturity (R_n).

$$\therefore B_0 = \sum_{k=1}^n \frac{C_k}{(1+r)^k} + \frac{R_n}{(1+r)^n} \quad \text{where } k = m, (k = 1, 2, \dots, n)$$

m = Number of times the coupon payment or the interest rate is paid in a year (i.e., if it is paid bi-annually then $m = 2$).

t = Maturity period of the bond.

C_k = Coupon payment at time period k .

R_n = Redemption value of the bond at time period ' n '.

r = discount rate.

B_0 = Bond price = present value of the cash flow.

As this discount rate (r) rises, the bond price (B_0) falls, and vice versa. Thus, we get a downward sloping bond value curve.

This discount rate accommodates the expected return of the investor for undertaking various risks such as inflation risk, interest rate risk, call risk, default risk, etc. Normally, any investor expects at least a minimum return from investment which is equal to a risk-free rate (normally offered by government bonds).

The current yield of a bond = $\frac{\text{Coupon rate} \times \text{Face Value}}{\text{Current bond price}}$

and the Yield to maturity (YTM) denotes the rate of return which the investor earns by holding the bond till its maturity. It reflects the interest rate or discount rate at which the present value of the future cash-flow stream generated by the bond becomes just equal to the current bond price.

In case of a zero coupon bond, the bond generates only one cash-flow at the time of its redemption period. Such bonds are normally issued at a discount.



If the bondholder sells the bond before its maturity date then the yield rate is called as the *realised yield*.

The term structure of interest rates implies that the interest rate charged for lending money or the interest rate paid for borrowing money would depend upon the length of time for which the money is being lent and or borrowed. The interest rate associated with a spot contract at any given point of time is called as *spot rate*. It involves immediate lending of an amount from the lender to the borrower. For zero coupon bond, the yield rate at the time of its purchase would indicate the spot rate. However, for coupon bearing bonds a method of 'bootstrapping' can be followed to estimate the spot rates on bonds with different maturity periods. If P = current bond price, C = coupon payment, F = face value of the bond, s_1 = 1-year spot rate, s_2 = 2-year spot rate, and if the values of s_1 , P , C and F are known then for a 2-year bond, s_2 can be determined using the formula $P = \frac{C}{(1+s_1)} + \frac{C+F}{(1+s_2)^2}$

A forward interest rate denotes the interest rate to be paid by the borrower to the lender on the amount borrowed in between two time periods in future based on the terms agreed upon at present (Thus, a forward rate $f_{1,2}$ denotes the interest rate on money lent out in period-1 and the receipt of principal alongwith interest in period 2). Any investor can follow either a maturity (direct strategy) strategy or a roll-over strategy while investing the fund in purchasing bonds, i.e., $(1+s_2)^2 = (1+s_1)(1+f_{1,2})$ for investment of ₹ 1 for 2 years.

$\therefore f_{1,2} = \frac{(1+s_2)^2}{(1+s_1)} - 1$. Hence, the estimation of the forward rate is based on spot rates. The generalised rule is

$$f_{i,j} = \left[\frac{(1+s_j)^j}{(1+s_i)^i} \right]^{\frac{1}{j-i}} - 1$$

Where $i < j$. In case of multi-period compounding of interest rate, this formula is expressed as

$$f_{i,j} = m \left[\frac{\left(1 + \frac{s_j}{m} \right)^j}{\left(1 + \frac{s_i}{m} \right)^i} \right]^{\frac{1}{j-i}} - m$$

There are four primary theories for the explanation of term structure of interest rates:

1. The expectation theory: This theory suggests that the expected future spot rate is determined by the forward rate, i.e., $s_{1,2}^e = f_{1,2}$, and in case of investment in a 2 year bond, an equilibrium is maintained

$$\text{when } (1+s_2)^2 = (1+s_1)(1+s_{1,2}^e)$$

$$\text{In case of investment for 'n' period, } (1+s_n)^n = (1+s_1)(1+s_{1,2}^e)(1+s_{2,3}^e) \dots (1+s_{n-1,n}^e)$$

The left hand side of this equation suggests the maturity strategy or direct investment strategy (in 2-year bond), and the right-hand side shows the roll-over strategy of investment. Hence, one can invest in long-term bonds (for n years) at the current spot rate for n -year bond (s_n), or he can first invest ₹ 1 for 1 year at the current spot rate for 1-year bond (s_1) and then after 1-year, he can reinvest

the maturity value at an expected spot rate in the next year ($s_{1,2}^e$), and then after 2 years, he can again

reinvest the maturity value in 1-year bond at an expected spot rate $s_{2,3}^e$, and so on.

From this relation, we can write $s_n = m \left[(1+s_1) \left(1 + \frac{s_{1,2}^e}{m} \right) \left(1 + \frac{s_{2,3}^e}{m} \right) \dots \left(1 + \frac{s_{n-1,n}^e}{m} \right) \right]^{\frac{1}{n}} - m$

Hence, according to the unbiased expectation theory, the current long-term spot rate (s_n) is an unbiased average (a geometric mean) of the current 1-year spot rate and the future expected spot rates.

If the investors expect that $s_{n-1, n} > s_{n-2, n-1} > \dots > s_{2,3} > s_{1,2}$ then the spot rate schedule or the yield curve would be upward sloping, and in that case $s_n > s_1$.

Similarly, if the investors expect that $s_{n-1, n} < s_{n-2, n-1} < \dots < s_{2,3} < s_{1,2}$ then the yield curve would be downward sloping. However, if the investors expect that $s_1 = s_{1,2} = s_{2,3} = \dots = s_{n-1, n}$

$$\text{then } s_n = \sqrt[n]{(1+s_1)^n} - 1 \\ = 1 + s_1 - 1 = s_1$$

In this case, the yield curve will be flat or horizontal.

2. **The liquidity premium theory:** This theory suggests that the investors usually prefer short-term fixed-income securities over long-term securities because they do not like to block their liquid fund for a long time.

They believe that long-term bonds entail more price risk or interest rate risk because the bond price may fall substantially when the investors want to sell such bonds before maturity dates. Hence, to induce such investors in buying long-term bonds, some liquidity premium has to be offered by the bond issuer so that $f_{1,2} = s_{1,2} + L_{1,2}$ where $L_{1,2}$ = liquidity premium for the period starting from next year from now, and ending at two years from now. So, for 2-year bond investment

$$\therefore (1+s_2)^2 = (1+s_1)(1+s_{1,2}^e + L_{1,2})$$

$$\text{or, } (1+s_2)^2 > (1+s_1)(1+s_{1,2}^e) \quad [\because L_{1,2} > 0]$$

This result implies that higher is the maturity period, higher should be the liquidity premium. This explains the upward sloping nature of the yield curve (here it is assumed that $s_2 > s_1$).

However, if it is assumed that $s_1 > s_2$ then the above inequality will hold only if the value of $s_{1,2}^e$ is sufficiently low. In that case, the yield curve will be downward sloping.

However, if it is assumed that $s_1 = s_2$ then the term structure becomes flat, i.e., the yield curve becomes horizontal. According to liquidity premium theory, the desired inequality [as shown in equation (2.31)]

would be maintained if $s_{1,2}^e$ remains less than s_1 when $s_1 = s_2$. However, the unbiased expectation theory suggests that in case of flat yield curve, the expected spot rates would remain unchanged.

3. **The market segmentation theory:** This theory shows that the securities market can be segmented into short-term securities market and long-term securities market. The term structure of interest rates, according to this theory, depends on the relative strengths of demand and supply in these segmented markets.
4. **The preferred habitat theory:** This theory suggests that the investors, based upon their preference and motivation towards taking risks, have some preferred zones of operation. Hence, if any investor prefers investment in 'low-risk low-return' bonds then he can withdraw himself from his preferred zone to enter into a zone with 'high-risk high-return' bonds only if he gets additional return on his investment. This will explain the term structure of interest rates.

Objective Question Bank

Each question carries 5/10 marks

Q. 1 Explain the relation between Short-term and Long-term Interest Rate.

An investor is supposed to have two investment options before him, viz. (i) He can purchase long-term bonds with a maturity period of 'N' years, or (ii) He can purchase short-term bonds of 1 year maturity period for each year upto (N-1) period.

Let us assume that the interest rate on long-term bonds, with a maturity period of 'N' years, is r . Now, if the investor invests a sum of ₹ P to purchase this long-term bond then at the end of the Nth period, he will receive

$$V_1 = P(1+r)^N \quad \dots (1)$$

However, if he invests the same amount in purchasing short-term bonds with 1 year maturity period for (N-1) years, then he will receive

$$V_2 = P(1+r_1)(1+r_2^e)(1+r_3^e) \dots (1+r_{N-1}^e) \quad \dots (2)$$

Here r_1 = Current interest rate on 1 year bond.

r_j^e = Expected interest rate on 1 year bond at the jth period or year.

If $V_1 > V_2$ then the investor will purchase more of long-term bonds. So, there will be an excess demand for long-term bonds. As a result, the price of long-term bonds will rise, i.e. r will fall (since,

bond price = $\frac{1}{r}$). So, V_1 will fall. Similarly, if $V_1 < V_2$ then the investor will purchase more of short-term bonds leading to an excess demand for short-term bonds. So, the prices of short-term bonds

will rise, i.e. r_j^e will fall. So, V_2 will fall. So, there remains a close relation between long-term and short-term interest rates in the financial market.

Q. 2 Distinguish between Nominal Interest Rate and Real Interest Rate.

Ans.: Nominal interest rate is that rate at which loan is raised from the finance market. On the other hand, the real interest rate implies the purchasing power of the nominal interest rate. If we deduct the inflation rate from the nominal interest rate, we get the real interest rate. The differences between nominal and real interest rates are shown below:

Sl No.	Nominal Interest rate	Real Interest Rate
1.	Nominal interest rate is that rate at which loan is raised from the finance market	Actual return on investment (RIR) is known as Real interest rate.
2.	Inflation cannot influence the nominal interest.	Variability of inflation rate influences the real interest.
3.	These rate of interest remains transcribed on the security bond or on the loan agreement.	Real interest rate varies from time to time and it is not written on the security bond or on loan agreement.
4.	Nominal rate of interest generally remains fixed or constant.	This rate remains variable with the trend of changes in inflationary conditions.
5.	It always remains positive	When the consumer price inflation becomes greater than the nominal interest rate, then this rate becomes negative.



Q. 3. Distinguish between Gross Interest Rate and Net Interest Rate.

Ans. Generally, $\text{Net or Pure Interest rate} = \text{Gross Interest Rate} - (\text{Premium for risk} + \text{Payment for inconvenience} + \text{Cost of management})$. Thus, the lender can deduct some amount from the gross interest for bearing some risks, and other inconveniences while giving loan to the borrower. The differences between the gross and net interest rates are shown as follows:

Basis	Gross Interest	Net Interest
Definition	Gross interest is the price paid to the provider or owner of capital for the use of the capital and for underwriting the risks and costs of providing loan for a specified period of time.	Net interest is the price paid to the provider or owner of capital for the services of capital only.
Elements	Following are the elements of gross interest: (a) risk element (b) cost management (c) payment for inconvenience	Risk element, cost of management and payment for inconvenience are not included in net interest.
Rate of interest	The rate of gross interest is more than the net interest.	The rate of net interest is lower than the gross interest.

Q. 4. Distinguish between Administered Interest Rate and Market Determined Interest Rate.

Ans. The interest rate which is determined by the monetary authority of the country, is called an administered interest rate. On the other hand, the interest rate which is determined through the market forces of supply of and demand for capital, is called as market-determined interest rate. The differences between these interest rates are shown below:

Basis	Administered Interest Rate	Market Determined Interest Rate
Definition	The interest rate which is determined by the monetary authority of the country.	The interest rate which is determined through the market forces of supply of and demand for capital.
Stability	This interest rate is sustained in the financial system for a long time period.	This rate changes frequently.
Type of Economy	It is generally observed in a centrally controlled or planned economy.	It is observed in capitalistic or market economy.
Example	Interest rate determined by the RBI particularly during pre-reform period before 1991.	Call money rate in the money market in India.

Q. 5. Explain the major determinants of the Interest Rate Structure.

Ans. Interest rate structure indicates the different rates of interest prevailing in an economy depending upon the amount of credit, maturity period, risk element etc. Determinants of the interest rate structure are:

- (1) **Default risk:** Interest rate remains directly correlated with default risk. Borrowers may fail to meet their obligations at the time of repayment of such loans. If the lender perceives that the default risk may be high, he charges higher interest to cover any potential loss.
- (2) **Inflation risk:** If inflationary condition persists, the real worth of money reduces. Uncertainties and risks increase with higher inflation. Nominal interest rate is ascertained by adding inflationary rate with real interest for long-term loan is less than that of short-term loan. It affects the interest rate.



- (3) **Liquidity risk:** Liquidity means the convenience with which an investment security can be marketed or converted into cash. Interest rate is inversely related with liquidity. If a security is easily convertible into cash interest on such security becomes lower.
- (4) **Call risk:** Corporate sector bonds may be issued with a special rider that the issuing company will be able to call back the bond before maturity at an agreed value. Interest on callable bonds would be higher than the interest rate of non-callable bonds.
- (5) **Capital risk:** It implies the variability of return on a security due to changes in the market interest rate. The investor may have to incur a loss in terms of lower return on a fixed interest bearing security due to a rise in market interest rate.

Explain the causes of variation in Interest Rate.

Rates of interest on different types of institutions under different situations become different. There are various reasons for such variations, these are discussed below:

- (1) **Time period of loan:** Interest rates varies according to the time period of loan. The longer is the recovery period, the higher is the risk of non-realisation. So, interest rate on long-term loan is higher than the interest on short term loan.
- (2) **Risk and uncertainty:** Degree of risk and uncertainty is an important factor for interest rate determination. Interest rate is higher where risk and uncertainty is higher.
- (3) **Purpose of loan:** Due to various reasons, loans are taken by the borrowers. Interest rate remains higher in case of personal loans and it is lower when loans are raised for production purposes.
- (4) **Quantum of loan:** It is an important factor for determining interest rate. In case of small amount of loan, chance of non-recovery is less. But in case of higher amount of loan, financial risk is more. So, interest rate on large amount of loan is high.
- (5) **Government priority:** In economic policies of the government, it identifies priority sectors where loans are available at a lower rate of interest. Banks also provide loans at a low interest rate to priority sectors (such as small and marginal farmers, small business etc.).
- (6) **Lack of competition in credit market:** If the credit market in the economy is not perfect, then higher interest rate is charged by the lender who enjoys monopoly power in credit market.

Discuss the recent changes in Interest Rate Structure in India.

During the pre-reform period, i.e. before 1991, the interest rate structure in India was very much regulated by the monetary authority. After the initiation of financial sector reforms in the early 1990s, various steps were initiated to deregulate the lending rates of commercial banks. The administered interest rates were reduced to three slabs in April 1993.

- (i) Advances upto ₹ 25,000.
- (ii) Advances more than ₹ 25,000 and upto ₹ 2 lakhs.
- (iii) Advances more than ₹ 2 lakhs.

In October 1997, banks were given the freedom to announce separate prime term lending rates (PTLR) for term loans of 3 years and above. The PTLR was applicable for providing credit facilities to the most creditworthy customers. It was lower than the normal lending rates. Banks were allowed to offer loans at below-PTLR (BPLR) rates to exporters and other creditworthy borrowers since April 2001. The RBI has also introduced the 'repo rate' as an instrument for short-term liquidity adjustment. The RBI generally raises the repo rate to check inflationary pressure. It raises the cost of borrowing short-term capital for the commercial banks. During the period of economic recession, repo rate is reduced. But it was observed that in many cases, the commercial banks did not change their lending rates in accordance with the change in repo rate or reverse repo rate. To overcome this problem, the RBI decided to implement the 'Base' rate system with effect from July 2010. The base rate is that minimum rate below which the banks are not allowed to lend. However,



since April 2010, the RBI has introduced a new methodology of fixing the lending rate by commercial banks. It is known as **Marginal Cost of Funds based Lending Rate (MCLR)**. According to this method, the banks will fix the lending rates on the basis of the latest costs of obtaining funds (say, from deposits and through borrowing from the RBI). Thus, the deposit rates as well as the 'repo' rates would influence the lending rates of the banks. The process of deregulation on deposit interest rates in commercial banks also began during the post-reform period. The RBI gave the freedom to commercial banks to fix their own interest rates on domestic term deposits of various maturities. The interest rate on savings deposit was also deregulated by the RBI with effect from October 2011.

Q. 8. How are liquidity and risk related to interest rate?

Ans.: Rate of interest on loan or credit depends on various factors, such as, liquidity, default risk, tenure of loan, etc. Liquidity of an investment is an important factor. Liquidity of any asset depends on the ease with which that asset can be converted into cash. Long-term loans are not easily recoverable. There is a time bound process for its recovery. On the other hand, short-term loans can be recovered by the lenders within a comparatively shorter time period. These remain more liquid. Due to inflation in the economy, value of money or purchasing power of money gradually decreases. Moreover, default risk increases in the case of long-term loans. Interest is charged by the lender at a higher rate on such loans. Default risk is also less in case of short-term loan. So, the lender charges a comparatively lower rate of interest on short-term loan, and higher interest rate on long-term loan. On the other hand, given the liquidity, a positive relation exists between the risk elements involved in credit giving operation and the interest rate charged by the lender. For instance, higher is the default risk, call risk, interest rate risk, counter-party risk, capital risk etc., the higher will be the interest rate.

Assignment

Short-Answer Type Questions

- What is meant by interest rate as defined by Alfred Marshall? (See Subsection 3.2.1)
- What is interest rate as a monetary phenomenon? (See Subsection 3.2.1)
- What do you mean by gross interest rate? (See Subsection 3.2.1)
- What do you mean by net interest rate? (See Subsection 3.2.1)
- Indicate any two differences between gross and net interest rate. (CU, BA/BSc. (G), Sem-V, 2021) (See Subsection 3.2.1)
- What is meant by nominal interest rate? (See Subsection 3.2.2)
- What is real interest rate? (See Subsection 3.2.2)
- Mention any two distinctions between nominal and real interest rate. (See Subsection 3.2.2)
- What is the relation between nominal interest rate and inflation rate? (See Subsection 3.2.2)
- What is meant by short-term interest rate? (See Subsection 3.2.2)
- What is long-term interest rate? (See Subsection 3.2.2)
- What is the difference between short-term and long-term interest rate? (See Subsection 3.2.2)
- What is call rate? (See Subsection 3.2.2)
- What do you mean yield rate? (See Subsection 3.2.2)
- Define the term 'yield to maturity'. (See Subsection 3.2.2)
- What is the classical notion on the determination of interest? (See Subsection 3.2.2)
- Define interest rate as supply price of capital. (See Subsection 3.2.2)
- What is meant by interest rate as demand price of capital? (See Subsection 3.2.2)
- Indicate any two limitations of Classical theory of interest rate. (See Subsection 3.2.2)

- What is loanable fund theory? (See Subsection 3.3.2)
- Indicate any two determinants of demand for loanable funds. (See Subsection 3.3.2)
- Indicate any two determinants of supply of loanable funds. (See Subsection 3.3.2)
- What, according to loanable funds theory, will happen to interest rate if people start hoarding money as means of savings? (See Subsection 3.3.2)
- Mention any limitation of loanable funds theory of interest rate. (See Subsection 3.3.2)
- What is meant by money as store of value? (See Subsection 3.3.3 & Summary)
- What do you mean by interest rate as monetary phenomenon? (See Subsection 3.3.3)
- What is the Keynesian theory of interest rate? (See Subsection 3.3.3)
- Define 'Liquidity Preference theory' of interest rate. (See Subsection 3.3.3)
- What are the three fundamental reasons by money holding as projection by Keynes in his doctrine on interest rate? (See Subsection 3.3.3)
- What is liquidity trap? (See Subsection 3.3.3)
- How is interest rate related to bond price? (CU, BA/BSc. (H), Sem-VI, 2022) (See Subsection 3.3.3)
- Mention any two limitations of 'Liquidity Preference' theory on interest rate. (See Subsection 3.3.3)
- How is interest rate determined through interaction between goods market and money market? (See Subsection 3.3.4)
- Mention any two reasons for interest rate being non-zero. (See Subsection 3.3.5)
- Can the interest rate be zero? Explain in brief. (CU, BA/BSc. (H), Sem-VI, 2022) (See Subsection 3.3.5)
- Mention any two factors determining the structure of interest rate. (See Subsection 3.3.6)
- What do you mean by 'term structure of interest rate'? (CU, Eco (G), 2020) (See Section 3.4)
- Mention any two causes of interest rate differentials. (CU, BA/BSc. (G), Sem-V, 2021) (See Subsection 3.3.7)
- Define yield curve. (See Section 3.4)
- What are the possible shapes of yield curve? (CU, BA/BSc. (H), Sem-VI, 2022)
- What do you mean by spot interest rate? (See Subsection 3.4.1)
- What is a zero coupon bond? (CU, BA/BSc. (H), Sem-VI, 2022)
- How can you calculate spot rate for zero coupon bond? (See Subsection 3.4.1)
- For zero coupon bonds, spot rate and yield rate are synonymous — Explain in brief.
- What do you mean by forward interest rate? (See Subsection 3.4.3)
- What is meant by discount rate? (See Subsection 3.4.2)
- What is the relation between spot and forward interest rate? (See Subsection 3.4.3)
- Mention the four fundamental theories on term structure of interest rate. (See Subsection 3.5)
- Mention any two assumption of expectation theory of term structure of interest rate. (See Subsection 3.5.1)
- What is long-term interest rate as defined by expectation theory? (See Subsection 3.5.1)
- Mention any two criticism of expectation theory of term structure of interest. (See Subsection 3.5.1)
- What does expectation theory of term structure of interest envisage? (See Subsection 3.5.1)
- What is the basic premise on term structure of interest rate, so far liquidity premium theory is concerned? (See Subsection 3.5.2)
- Mention any two assumptions as made in liquidity premium theory on term structure of interest rate. (See Subsection 3.5.2)



48. What does 'Liquidity Premium' theory predict about the term preference of an investor regarding lending? (See Subsection 3.2.1)
49. What does 'Liquidity Premium' theory predict about the term preference of borrowers regarding borrowing and why? (See Subsection 3.2.1)
50. Mention the segment of security market as envisaged by market segmentation theory of term structure of interest rate. (See Subsection 3.2.1)
51. What is the assumption on the substitutability between short-term and long-term securities as made in market segmentation theory? (See Subsection 3.2.1)
52. Mention any two factors responsible for disparity in interest rates across an economic system. (See Subsection 3.2.1)
53. What is 'Preferred Habitat' theory of term structure of interest rate? (See Subsection 3.2.1)
54. Mention any two objectives behind the practice of regulated (or administered) interest rate regime in India. (See Subsection 3.4)
55. Indicate any two ways RBI influenced the interest structure prior to economic reforms. (See Subsection 3.4)
56. Mention any two changes introduced by the government of India to deregulate the interest rate structure. (See Subsection 3.4)
57. Indicate any two impacts of globalization on interest rate structure in India. (See Subsection 3.4.1)
58. Explain the notion of present value of a bond with the help of an example. (See Subsection 3.4.1)

[CU, BA/BSc. (H), Sem-VI, 2017]
(See Subsection 3.4.1)

Long-Answer Type Questions

1. Write short notes on : Gross and Net Interest Rate. (See Subsection 3.2.1)
2. Write short notes on : Short-term and Long-term Interest Rate. (See Subsection 3.2.1)
3. Explain briefly the components of nominal and real interest rate. (See Subsection 3.2.1)
4. Differentiate between administered and market determined interest rate regime. (See Subsection 3.2.1)
5. Differentiate between nominal and real interest rate. (See Subsection 3.2.1)
6. Explain the major determinants of interest rate structure. (See Subsection 3.2.1)
- or, What are the sources that result in interest rate differentials? [CU, BA/BSc. (H), Sem-VI, 2017]
(See Subsection 3.2.1)
7. Explain the Classical Theory of determination of equilibrium interest rate. (See Subsection 3.2.1)
8. (a) State the sources of demand for loanable funds.
(b) State the sources of supply of loanable funds.
(c) Explain the mechanism underlying the determination of equilibrium interest rate as projected in loanable funds theory. (See Subsection 3.2.1)
9. Give a critical estimation of loanable funds theory of interest rate. (See Subsection 3.2.1)
10. Explain briefly the context of interest rate being monetary phenomenon. (See Subsection 3.2.1)
11. Examine the role of liquidity preference in determination of equilibrium interest rate. (See Subsection 3.2.1)
12. Discuss Hicks-Hansen approach to determination of equilibrium interest rate. (See Subsection 3.2.1)
13. (a) Explain the 'Expectation Theory' on term structure of interest rate. [CU, BA/BSc. (H), Sem-VI, 2017]
(b) Indicate the possible shapes of yield curve. (See Subsection 3.2.1)
- or, (a) What is the relation between nominal and real interest rate?
(b) What is term structure of interest rate? Critically explain the Expectation Theory on term structure of interest rate. [CU, BA/BSc. (H), Sem-VI, 2017]
(See Section 3.5 & Subsections 3.2.1 & 3.2.2)



14. (a) What do you mean term structure of interest rate?
(b) Explain the Liquidity Preference Theory of the term structure of interest rate. (See Section 3.4 & Subsection 3.2.1)
15. (a) Explain briefly the tenets of market segmentation theory on term structure.
(b) Examine the factors behind the incidence of interest rate differential in an economy.
16. Explain the concepts : (a) Call rate, (b) Yield rate (c) Yield to Maturity (d) Implied Yield. (See Subsection 3.2.1)
17. Explain the concepts : (a) spot interest rate (b) forward interest rate (c) rate of arbitrage. (See Subsections 3.4.1 & 3.4.2)
18. Discuss the interest rate structure during the phase from 1980 till recent time.
Or, Trace out a brief account on the dynamics of interest rate structure in India. (See Subsection 3.4)
19. Examine the impact of globalization of interest rates in India. (See Subsection 3.4.1)
20. Explain briefly any of the theories of term structure of interest rates. [C.U. BA/BSc. (H)] Sem-VI, 2008
(See Section 3.5 & Subsections 3.2.1 & 3.2.2)





Central Banking and Monetary Policy

4.1. Introduction

It is largely by now, that the banking sector plays the indispensable role as financial intermediary in mobilisation of saving for financing the investments at large, which is key to the growth or expansion of economic activities. To this end, this particular sector can be viewed as a prime avenue for the institutionalisation of saving formation on the one hand, and that of money lending on the other. This in turn calls for establishing a regulatory apparatus to monitor and supervise the functioning of the banking sector, so as to enable an efficient conversion of savings into investment by keeping with the interest of primary savers and that of borrowers. Hence, we arrive at the need for a Central Bank to operationalise this very regulatory mechanism. Besides, there is a far-flung macroeconomic angle to this matter, in as much as the mobilisation of liquidity is key to supporting the overall expenditure flow in the economy and thereof, has crucial implication for the economy's aggregate demand condition. Now, this is what forms the basis of the idea behind 'monetary transmission', which in simple terms refers to the process by which Central Bank's Policy actions find reflection in target macroeconomic variables, namely, growth rate in general and inflation rate in particular. It is worth mentioning at this point, that there are four broad channels of monetary transmission found in vogue, namely, interest rate channel, credit channel, asset price channel and exchange rate channel. To this end, it can be said that working of a particular monetary policy framework is aligned with any of these channels, specifically, or a combination of all, in general. Thus, in short, the presence of central banking in an economy essentially comes up in the reflection of its regulatory role for the banking sector at large along with the conduct of macroeconomic management through monetary policy.

4.1.1. Monetary Policy of the Central Bank : Targets & Instruments

Normally any Central Bank aims at growth with price stability, i.e. in this case there are two distinct targets of the Central Bank, viz. growth of the economy in terms of the growth in real national income and the stability in price level. The Central Bank (say, the Reserve Bank of India) uses several credit control instruments to achieve its targets. However, in 1952, economist like Jan Tinbergen opined that any Central Bank would require at least same number of instruments to achieve a certain number of monetary targets. Moreover, if such targets are distinct in nature then the policy instruments should also exert a distinct influence on those target variables.

Let us now assume that the monetary policy of the Central Bank has two distinct targets : (i) To ensure a targeted price level, say, P_T , and (ii) to attain a targeted real national income, say, Y_T .

In Fig-4.1, the positively sloped line SRAS denotes the short-run aggregate supply schedule, and the negatively sloped AD line denotes the aggregate demand schedule in an economy. At the prevailing equilibrium situation, the

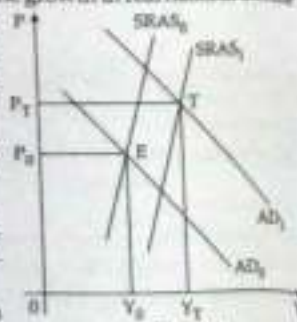


Fig-4.1



equilibrium value of the real national income (Y) is Y_E and the corresponding equilibrium value of price (P) is P_E (as indicated by the equilibrium point E). The Central Bank can outline one policy instrument to shift the AD schedule from AD_0 to AD_1 (Fig-4.1) and another instrument to shift the SRAS schedule from $SRAS_0$ to $SRAS_1$, so as to achieve the targeted real national income Y_T and the targeted price level P_T . If the Central Bank follows cheap money policy (say, by lowering the repo rate, Cash Reserve Ratio, Statutory Liquidity Ratio etc.) then credit flow and hence, the supply of money will increase in the economy. As a result, the aggregate demand for goods and services are expected to increase in the economy causing a rightward shift in AD schedule. However, it has been observed that most of the policy instruments of the Central Bank can have an impact particularly on AD schedule. These policy instruments can hardly cause any impact upon the SRAS schedule. Hence, SRAS cannot be shifted to the desired direction by changing the policy instruments available with the Central Bank. Thus, it becomes difficult to achieve both these targets simultaneously.

Fig-4.2 shows that if the monetary policy instruments of the Central Bank can only influence the AD schedule then P_T can be ensured by shifting the AD schedule to the rightward direction from AD_0 to AD_1 (i.e. a movement from equilibrium point E to F). But at $P = P_T$, the equilibrium $Y = Y_1 < Y_T$, i.e. the targeted Y cannot be achieved. Here, the real income target can be achieved by shifting the AD schedule upto AD_2 . But in that case, the equilibrium price P_2 becomes more than the targeted level P_T .

Thus, it becomes clear that only the number of policy instruments available with the Central Bank is not sufficient to ensure the attainment of the targeted variables. What is more important is the availability of independent policy instruments which can exert independent impact upon the target variables. But the Central Bank has virtually no policy instrument to control and influence the SRAS schedule. Therefore, the Central Bank often fails to achieve either Y of those two targets, i.e. the Central Bank can either achieve the real income target or the price level target. Therefore, it is often said

that the Central Banks are always trading off the achievements of one set of goals for the achievements of another set of goals.

In many instances, a proper coordination between the monetary and fiscal instruments has been proved to be more effective in achieving those targets since the fiscal instruments like tax and subsidy can lead to a shift in the SRAS schedule.

Short-run and long-run situations :

During long-run, it is assumed that the aggregate supply (AS) schedule becomes vertical, i.e. AS cannot be increased any further.

In Fig-4.3, the LRAS line denotes the long-run aggregate supply schedule and it becomes vertical. Now, if the targeted price level is P_T and the initial equilibrium price is P_0 with $AD = AD_0$ then the Central Bank can use its policy instrument to shift the AD schedule from AD_0 to AD_1 so that equilibrium price rises upto P_T (i.e. equilibrium point shifts from E to T). Similarly, if the prevailing equilibrium price is P_1 (corresponding to the equilibrium point F) which is higher than the targeted price P_T , the Central Bank can use its policy instrument to shift the AD schedule towards the leftward direction from AD_2 to AD_1 so as to achieve the targeted price level P_T . The Central Bank, however, has no control over the long-run real national income Y_2 since it

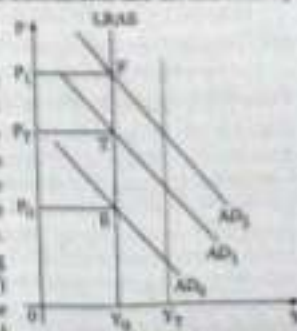


Fig-4.3



remains fixed. So, if the targeted output $Y_1 > Y_0$, then that target cannot be achieved by the policy instruments of the Central Bank. So, it is often said that an output target in the long-run is a quixotic goal for the monetary authority of the country. Sometimes the price expectations of the workers consequent upon the change in policy instrument by the Central Bank can also reduce the effectiveness of the monetary policy. If the workers expect that the policy instrument of the Central Bank would cause a rise in price level then, given their nominal wage rate, the workers would demand for a wage hike. This would lead to a rise in input cost of the producers and the SRAS would shift upward to the left. Hence, given the aggregate demand schedule, equilibrium output will fall.

Intermediate targets of Monetary Policy:

The monetary authority of a country may have some intermediate targets which help the Central Bank of the country to attain its final targets. The final target of the monetary policy might be targeting an inflation rate whereas the intermediate target might be fixing a target for money supply in the economy. Now, the question is why such intermediate targets are required to achieve the final targets of the monetary policy? The reasons are as follows:

- If the Central Bank fixes an intermediate target then that step can help the monetary authority to avoid several policy debates involving issues like unemployment reduction, output growth, inflation control and so on. In fact, it becomes easier for the Central Bank to see whether the growth in money supply can be restricted between 2-4% per annum than to ensure a target of employment growth between 6-10% per annum.
- Further, these intermediate targets provide timely information on the state of the economy to the Central Bank and, hence, provide adequate scope for attaining the final targets. The intermediate target variables are daily interest rates, repo rates, change in supply of narrow money (M_1), Consumer Price Index, Real GDP etc. the information on which can be gathered for the intermediate periods. As a result, on the basis of these intermediate information, the Central Bank can understand how well it is heading towards achieving the intermediate targets.

Now, while selecting the intermediate targets, the Central Bank should take into account the following properties of the targets:

- While selecting the intermediate target variable, the Central Bank takes into consideration the fact whether these intermediate targets would be helpful in achieving the ultimate target variables.
- These intermediate targets should be accurately measurable at regular intervals during the intermediate period. It provides the Central Bank with accurate information regarding the impact of its policy actions, and helps the Central Bank to select the correct policy instrument.
- These intermediate targets should be controllable so that the Central Bank can be more confident to achieve the final targets.

Controlling aggregate money supply as an intermediate target:

The ultimate target of the Central Bank may be attaining an inflation rate of 4% and a real GDP growth of 6%. It implies a nominal GDP growth target of 10% (real GDP growth + inflation rate). The Central Bank expects that the real money demand would grow at the rate of 6% per annum, i.e., this growth would be equal to that of the real GDP growth. Further, the Central Bank also expects that the demand for nominal money balance would grow at the rate of 10% per annum, i.e., it would be equal to the growth rate of nominal GDP. Thus, the velocity of money would be stable (i.e. a zero per cent velocity growth). The Central Bank can also expect that the nominal interest would remain stable at 6%, and with 4% inflation rate, the real interest rate would be 2%.

With these targets and presumptions, the Central Bank can set an intermediate target of 10% growth in nominal money supply during a particular year. Fig-4.4 shows that the intermediate objective of the Central Bank is to maintain a nominal money stock at M_1 . The money supply schedule at the

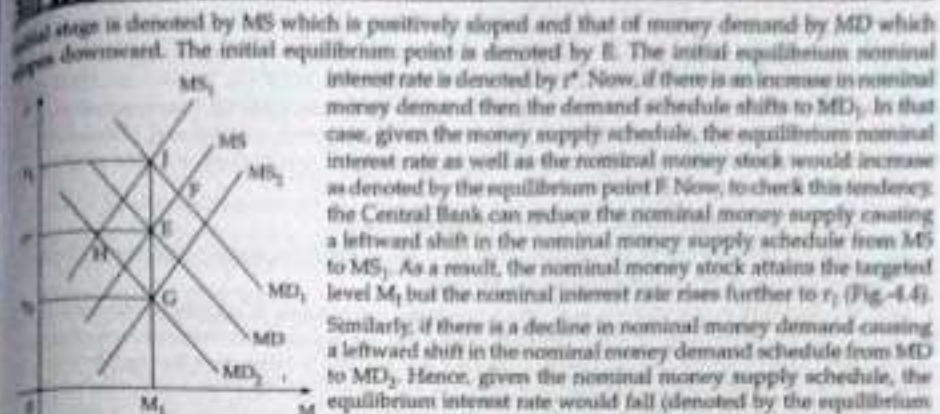


Fig-4.4

the nominal money supply schedule shifts to the right from MS to MS_2 . Hence, the targeted nominal money stock is restored at M_1 (denoted by the equilibrium point G) but the equilibrium nominal interest rate would become r_1 which is less than r^* .

So, it becomes clear that an intermediate target of maintaining a nominal money stock can be achieved by compromising with the Central Bank's control over the nominal interest rate. Therefore, we find that when the Central Bank chooses an intermediate monetary target, the volatility in the interest rate becomes higher. Hence, it is possible on the part of the Central Bank to achieve only one target, viz. the controlling of money supply, and it fails to attain the target of maintain a particular nominal interest rate.

Controlling nominal interest rate as an intermediate target:

The Central Bank can expect that the nominal interest would remain at 6%, and with 4% inflation rate, the real interest rate would be 2%. Now, given its expectation regarding the nominal and real growth in GDP, the Central Bank can fix an intermediate target of attaining a nominal interest rate of 6%. Then the Central Bank can manipulate the nominal money supply to attain that targeted interest rate, r_T , denoted by r_T as shown in Fig-4.5.

Fig-4.5 shows that the intermediate objective of the Central Bank is to maintain a nominal interest rate at r_T . The money supply schedule at the initial stage is denoted by MS which is positively sloped and that of money demand by MD which slopes downward. The initial equilibrium point is denoted by A. The initial equilibrium nominal interest rate is denoted by r_T . Now, if there is an increase in nominal money demand then the demand schedule shifts to MD_1 . In that case, given the money supply schedule, the equilibrium nominal interest rate would increase as denoted by the equilibrium point B. Now, to check this tendency and to maintain the targeted interest rate, the Central Bank can increase the nominal money supply causing a rightward shift in the nominal money supply schedule from MS to MS_1 . As a result, the nominal money stock rises to M_1 but the nominal interest rate declines to r_T as denoted by the equilibrium point C (Fig-5).

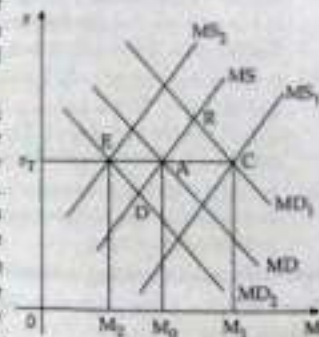


Fig-4.5



Similarly, if there is a decline in nominal money demand causing a leftward shift in the nominal money demand schedule from MD_0 to MD_1 . Hence, given the nominal money supply schedule, the equilibrium interest rate would fall (denoted by the equilibrium point D). In that case, the Central Bank can reduce the nominal money supply. As a result, the nominal money supply schedule shifts to the left from MS_0 to MS_1 . Hence, the targeted nominal interest rate is restored at r_1 (denoted by the equilibrium point E) but the equilibrium nominal money supply would decline to M_1 which is less than M_0 .

Justifications for setting interest rate as an intermediate target :

Some of the economists are of the opinion that the Central Bank has some valid justifications for setting interest rate as an intermediate target variable.

Firstly, the changes in the interest rate affect two large components of aggregate demand in the economy, viz. aggregate consumption expenditure (C) and the aggregate investment expenditure (I). In a closed economy ($C + I$) determines the aggregate demand and it determines the equilibrium level of real output in the economy. This aggregate demand also determines the price level in the economy. If the intermediate interest rate target aims at maintaining a stable interest rate then variations in C and I can be reduced.

Secondly, this intermediate target also helps in reducing the impact of changes in money demand on real GDP and the price level. In fact, a change in money demand leads to a change in the interest rate and this, in turn, causes a shift in the aggregate demand schedule. Hence, with an intermediate target of maintaining a stable interest rate, the economy becomes insulated against the variations in money demand.

Arguments against setting interest rate as an intermediate target :

Some economists are not in favour of fixing rate of interest as an intermediate target. They put forward the following arguments :

- If in an economy, the C and I rise for reasons other than the changes in interest rate (say, due to the tax policy of the government) then it can be shown that the intermediate interest rate target would ultimately exacerbate the effect on aggregate demand. For instance, if an increase in investment demand causes excess demand for loanable fund then equilibrium interest rate would rise. In that case, the Central Bank would increase the money supply to reduce the interest rate (so as to keep it at the targeted level). But with the increase in money supply as the interest rate declines, the investment demand would rise further.
- It is also argued that the intermediate target of maintaining a stable interest rate is not feasible in the long-run. This is because of the fact that the long-run interest rate is determined by some real factors which are beyond the scope of Central Bank's control. In fact, a stable long-run interest rate also implies a stable expected inflation rate in the long-run which seems to be impractical.
- In many cases, this intermediate target of keeping the nominal interest rate at higher level might be politically unviable because the common people (the voters) normally are in favour of a low level of interest rate.

Justifications for setting money supply as an intermediate target :

There are also some arguments in favour of setting money supply as an intermediate target of the Central Bank.

Firstly, this intermediate target allows the interest rate to rise in response to the shifts in C and I schedules caused by the movements in interest rate. Hence, it reduces the possibility of fluctuations in aggregate demand due to those causes. Let us assume that C has declined due to unexpected rise in thriftiness in the economy. As a result, aggregate demand will fall in the economy. So, the price level and the real GDP will fall. If there remains an intermediate target of controlling the money stock, then



with a fall in real GDP, as money demand falls, the Central Bank increases the money supply to maintain the targeted level of money stock. Hence, the interest rate would fall and as a consequence, C and I will rise.

Secondly, this target is less likely to face any political opposition because the voters are not normally bothered about the size of money stock in the economy.

Thirdly, the Central Bank can easily achieve this target even in the long-run.

Arguments against setting control over the money stock as an intermediate target :

Some economists have pointed out that setting control over the money stock as an intermediate target by the Central Bank can create some problems :

- While fixing the intermediate target of controlling the money stock, it is difficult on the part of the Central Bank to choose the correct monetary aggregate (M_1 or M_2 or M_3 etc.) as the control variable.
- This intermediate target can lead to large-scale variations in interest rate. This is particularly true when the money demand is itself variable. Again, the variability in the interest rate would mean variability in C and I .

4.2. Monetary Policy in India : Its Instruments

As already discussed in chapter-1 at length, in any country monetary policy is framed and conducted by the country's Central Bank and is henceforth upgraded as monetary authority. However, in this chapter we shall briefly recapitulate the context of monetary policy as in case of India with respect to the instruments used by the Reserve Bank of India (RBI) to control the volume and quality of credit flow in the economy and thereby, to condition the state of aggregate spending or aggregate demand during a given period of time.

To begin with, as what is forgone, that the instruments deployed by RBI as for credit control can be broadly classified under :

- Quantitative Credit Control, and
- Qualitative Credit Control.

4.2.1. Quantitative Credit Control

Some of the quantitative credit control instruments adopted by the RBI are as follows :

- Bank rate :** Theoretically, the bank rate is that discount rate at which the central bank of any country rediscounts any bill of exchange submitted by any commercial bank to take loans from the central bank. In the case of India, it generally indicates the interest rate at which the commercial banks borrow credit money from the RBI. So, the bank rate can be considered as the cost of borrowing credit money for commercial banks. To check inflationary pressures, the RBI increases the bank rate. It is called 'dear money policy', because the cost of borrowing credit money becomes higher for the commercial banks. So, commercial banks are then permitted to increase their lending rates (up to a limit fixed by the RBI). This discourages the investors to take loans from commercial banks, resulting in a fall in investment in the economy. This fall would mean a lesser generation of employment and income opportunities. This, in turn, checks the growth in demand for different products, and, hence, the inflationary pressure.

On the other hand, the RBI keeps the bank rate at a low level to check the deflationary situation (i.e., the excess supply condition). This is known as 'cheap money policy'. During the First Five Year Plan, the RBI followed such 'cheap money policy' in view of the low inflationary pressures. So, the bank rate remained at a low level. However, since the Second Five Year Plan, the RBI started following the 'dear money policy' through a gradual rise in the bank rate. At present, the bank rate serves as a reference rate for other interest rates in the financial market. The movement in bank rates over the years has been shown in Table-4.1.

Table 4.1

Movements in the Bank Rate

Month/Year	Bank Rate (%)	Month/Year	Bank Rate (%)
July, 1981	3.0	October, 2001	6.5
November, 1983	3.5	October, 2002	6.25
July, 1984	5.0	April, 2003	6.0
April, 1979	9.0	January, 2005	6.0
July, 1985	10.0	April, 2009	6.0
July, 1991	11.0	July, 2010	6.0
October, 1991	12.0	May, 2011	6.0
April, 1997	11.0	February, 2012	9.5
June, 1997	10.0	April, 2012	9.0
January, 1998	11.0	October, 2016	6.75
April, 1998	10.0	December, 2017	6.25
May, 1998	9.0	December, 2018	6.75
April, 1999	8.0	December, 2019	5.40
April, 2000	7.0	December, 2020	4.25

Source: Compiled from Economic Survey (Government of India), several issues.

However, the success of this credit control instrument depends on the following factors:

- The money market must be well-integrated and organised in nature;
- The commercial banks should not maintain excess reserves;
- The commercial banks must have an adequate quantity of rediscountable bills of exchange; and
- The commercial banks should not be averse to availing of rediscounting facilities from the RBI.

As some of these conditions were absent in the Indian money market, this policy instrument did not work in an effective manner until recently.

- Open market operations:** This indicates the purchase and sale of Government securities or treasury bills by the RBI. At the time of inflation, the RBI sells Government securities in the open market to pump out some amount of money from circulation. Most of these securities are purchased by commercial banks and other financial institutions. Since 1962, open market sales of such securities were pursued by the RBI to raise resources for meeting development expenditure and defence expenditure of the Government. However, the open market sale has been pursued by the RBI to check the continuous expansion of liquidity with the banking sector since the first half of the 1980s. The RBI has been extensively undertaking 'switch operations', i.e., purchase of one treasury bill against the sale of another or vice versa.

The success of this policy instrument depends on an organised bill/security market. In India, since the Government securities are held particularly by the institutional investors, viz., commercial banks, dealings of the RBI with regard to the open market operations are mostly confined to these institutional investors.

- Cash reserve requirements:** According to the RBI Act, 1934, every commercial bank had to keep a certain minimum cash reserve with the RBI (this was 5 per cent against demand deposits, i.e., savings and current deposits and 2 per cent against time deposits, i.e., fixed deposits). By an amendment to that Act in 1962, the RBI was empowered to vary the cash reserve requirements between 3–15 per cent of total deposits of commercial banks.



The RBI increases this cash reserve requirements during inflation. For example, the RBI increased the CRR from 5.5 per cent to 5.75 per cent in February, 2007 and further to 9.0 per cent in July, 2008 to check the inflationary pressure. In fact, the CRR was raised from 8.25 per cent in April, 2008 to 8.75 per cent in June, 2008 and further to 9.0 per cent in July, 2008. With a rise in the cash reserve requirements, the amount of loanable funds with the commercial banks declines. Thus, the process of credit creation by the commercial banks is checked. Similarly, the RBI reduces this cash reserve requirements at the time of deflation. For example, the RBI reduced the CRR gradually from 9.0 per cent to 5.0 per cent during April, 2009 to tackle such deflationary condition particularly in the financial sector. Again, during 2009–10, the CRR was raised to control inflationary pressure. The movements of this cash reserve ratio have been shown in Table 4.2.

Table 4.2

Movements in the Cash Reserve Requirements (CRR)

Year/Month	CRR (%)	Year/Month	CRR (%)
July, 1962	3.0	November, 2002	4.75
November, 1970	5.0	June, 2003	4.5
April, 1976	6.0	January, 2005	5.0
June, 1981	7.0	March, 2007	6.0
January, 1983	8.0	November, 2007	7.5
May, 1984	9.0	July, 2008	9.0
July, 1988	10.0	November, 2008	5.5
April, 1989	15.0	April, 2009	5.0
June, 1993	14.0	July, 2010	6.0
August, 1994	15.0	May, 2011	6.0
June, 1996	13.0	January, 2012	5.5
August, 1998	11.0	March, 2012	4.75
May, 1999	10.0	October, 2016	4.0
November, 1999	9.0	December, 2018	4.0
April, 2000	8.0	December, 2019	4.0
December, 2001	5.5	April, 2020	3.0

Source: Compiled from Economic Survey (Government of India), different issues.

- Statutory Liquidity Ratio:** Apart from the cash reserve requirements, all commercial banks under the Banking Regulation Act (1949), are to maintain liquid assets in the form of cash in hand, cash with other banks, gold and unencumbered approved securities equal to not less than 20 per cent of their total time and demand deposits with the RBI. This is known as 'Statutory Liquidity Ratio (SLR)'. In 1962, this was raised to 25 per cent (over and above their minimum cash reserve requirements). The RBI was empowered to raise this ratio up to 40 per cent.

In fact, the change in cash reserve ratio was supposed to be ineffective in many cases because commercial banks used to rediscount securities with the RBI and hence, their capacity to create credit remained intact. So, this policy instrument was used to control credit. It was observed that the RBI raised this SLR continuously during the plan periods, to check inflationary pressures. However, keeping in view the recommendations of the Narasimham Committee, the RBI decided to reduce SLR in stages. During November, 2008 SLR was reduced to tackle deflationary condition. This movement in SLR has been shown in Table 4.3.

Table 4.3
Movements in Statutory Liquidity Ratio (SLR)

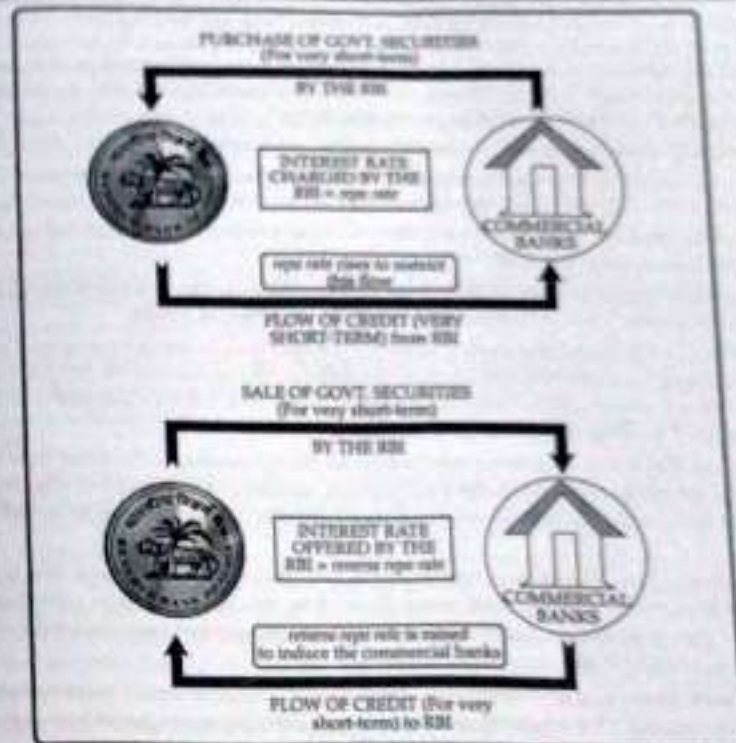
Year	SLR (%)	Year	SLR (%)
1970	30.0	2005	25.0
1975	32.0	2008	24.0
1979	33.0	2009	24.0
1987	37.4	2012	23.0
1988	36.0	2016	20.5
1990	36.5	2017	19.5
1996	28.0	2018	19.5
1997	25.0	2020	18.0
2001	25.0		

Source: Economic Survey (Government of India), several issues.

Apart from this quantitative credit control policy, the RBI has also used the qualitative or selective credit control policy to check the flow of credit according to the repaying capabilities of the borrowers or according to the purpose of taking loans.

■ **The Liquidity Adjustment Facility (LAF):** Since 2000, the RBI also follows the LAF to regulate the fluctuations in the interest rates in the market. Please note that the liquidity of any asset depends on the ease with which it can be converted into cash. Thus, cash is considered to be the most liquid asset. The market rates of interest fluctuate because of the mismatch between the supply of and demand for such liquid assets. Now, if there is excess demand for liquidity then the RBI facilitates the flow of credit supply in the economy. The RBI then purchases government securities from the commercial banks for a very short-period (say, 7 days) and, in turn, extends credit facilities to the commercial banks. There takes place an agreement between the commercial banks and the RBI that the commercial banks will repurchase those securities at a given price after a given time period from the RBI. Here, the interest rate charged by the RBI is called the 'repo' rate (related to that 'repurchase' agreement). On the other hand, when the RBI wants to pump out excess liquidity from the market then it sells government securities to the commercial banks with such repurchase agreement (i.e., the RBI will buy back those securities from the commercial banks at a predetermined price after a given time period). Here, the interest rate fixed on these government securities is called the 'reverse repo' rate.

This 'reverse repo' rate is often fixed by an auction of government securities because banks find investment in government securities as a secured and less risky proposition. During 2007, the reverse repo rate was about 6% and it was gradually reduced to 3.25 per cent during April, 2009. The reverse repo rate was raised to 4 per cent during July, 2010 and further up to 7.5 per cent in October, 2011 (in different phases) to check inflationary pressure. However, the RBI raised the repo rate from 7.75 per cent to 8 per cent during June, 2008 and further to 9 per cent in July, 2008 to check inflationary pressure. However, the reverse repo rate was kept unchanged. The repo rate was gradually reduced to 7.5 per cent during November, 2008 and further to 4.75 per cent in April, 2009 to tackle deflationary condition. However, the repo rate was increased to 5.5 per cent in July, 2010 and further up to 8.5 per cent in October, 2011 (in different phases) to check inflationary pressure.



Besides, of late, RBI introduced a long-term extension of repo operation amidst the recent (2020-21) economic turmoil resulting from the outbreak of pandemic to provide additional liquidity facility to banks faced with financial woes. This newer window for the stabilisation of liquidity condition in the economy is named as **Tap Targeted Long Term Repo Operations (TTLTROs)**, which will remain operational over the period from October 22, 2020 till March 31, 2021 and it comes with tenor up to 3 years for total amount up to 1 lac crore rupees at floating rate linked policy repo rate. The liquidity facility available under this new scheme has to be deployed in corporate bonds, commercial paper and non-convertible debentures issued by entities in some specific sectors (which include, agriculture, agri-infrastructure, secured retail, MSME, drugs+, pharmaceuticals and healthcare) over and above their outstanding level of investment in these instruments as on September 30, 2020. Moreover, banks can use the liquidity support as under TTLTRO for extending loan and advances to these sectors.

4.2.2. Qualitative or Selective Credit Control

In a developing country like India, the quantitative credit control policy may affect development efforts in some vulnerable parts of the economy (e.g., the agricultural sector, consisting of small and marginal farmers, small entrepreneurs, artisans, etc.), because in this case the flow of total quantity of credit is restricted irrespective of agricultural and industrial sectors. Thus, the basic objective of employment generation and reduction of income inequalities would be frustrated. To avoid these unwanted consequences, the RBI follows the selective credit control policy.



When credit control measures are imposed by any central bank to check the flow of credit on the basis of its quality, i.e., on the basis of the repayment capability of the person who has taken the loan or on the basis of the purpose for which the loan is taken from commercial banks, they are called qualitative or selective credit control measures. Hence, the qualitative credit control policy can control both the volume and pattern of investment in a country like India.

The RBI generally uses three types of selective credit control instruments:

- Margin money:** This implies the minimum margins to be kept by the borrowers with commercial banks while borrowing money against specific securities from commercial banks.
- Credit authorisation:** This shows the ceiling on the amount of credit for certain purposes (which needs prior sanction of the RBI).
- Differential Rates of Interest (DRI):** This scheme relates to the discriminatory rate of interest charged on certain lines of advances provided by commercial banks.

In 1956, the RBI used this selective credit control for the first time to restrict the speculative hoarding of foodgrains. Traders used to take loans from commercial banks against the security of paddy, causing an artificial crisis of paddy in the foodgrains market. So, in May, 1956 a directive was issued by the RBI to reduce such lendings by commercial banks.

Since 1973-74, the RBI followed stricter selective credit control measures for more than two decades. Bank advances against the stock of foodgrains, oilseeds, sugar, gur and khandsari, vegetable oil, cotton and kapas were restricted. The margin money requirements in these cases varied between 20-75 per cent.

The Credit Authorisation Scheme was introduced in 1965 and at the initial stage this limit was fixed at ₹ 1 crore for borrowers in the private sector. Since then, this limit has been raised several times. Since July, 1987, the credit authorisation scheme was liberalised to meet genuine credit needs without any prior sanction of the RBI.

Under the present move towards economic liberalisation, selective credit controls were virtually withdrawn since October, 1996 (the only exception being bank advances against buffer stocks of sugar and unreleased stock of sugar to sugar mills).

■ **Moral suasion:** Apart from the abovementioned credit control instruments, the RBI also follows the method of moral suasion to regulate the supply of credit. It is a moral appeal of the RBI to commercial banks urging them to restrain from certain lines of credit operations.

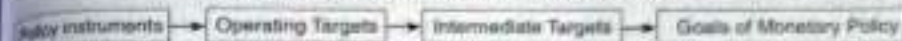
4.2.3. Monetary Policy in India : Different phases

Normally any Central Bank, in its monetary policy, aims at growth with price stability, i.e. in this case there are two distinct targets of the Central Bank, viz. growth of the economy in terms of the growth in real national income and the stability in price level. However, there can be other goals like stability in the financial market as well as in the foreign exchange market. However, several economists are of the opinion that it becomes difficult to attain all these targets simultaneously. Hence, the Central Bank may fix some intermediate targets to achieve its final goal.

The final target of the monetary policy might be targeting an inflation rate whereas the intermediate target might be fixing a target for money supply in the economy. These intermediate targets provide timely information on the state of the economy to the Central Bank and, hence, provide adequate scope for attaining the final targets. Thus, the key components of the monetary policy framework of the reserve Bank of India (RBI) are the policy instruments used for the achievement of its final target. It is achieved through the achievement of some intermediate targets and hence, to attain the principal goals of monetary policy.



Key Components of Monetary Policy Framework



Now, we shall discuss different phases of the evolution of monetary policy in India.

■ **Upto early 1980s:** Monetary policy was completely subservient to the fiscal policy:

Upto the early 1980s, the Indian economy was virtually a closed one. Prices of a significant number of commodities were administered in India at that time. To sustain these prices at a steady level, government subsidies were often necessary and this was one of the factors that led to a chronic budget deficit. These deficits were either financed through ad hoc treasury bills or through indirect borrowings, mostly from nationalized banks. The first led to more or less automatic monetisation of budget deficit. The RBI credit to the government was the dominant factor behind reserve money expansion and the consequent expansion in money supply.

To control the money supply, the RBI had to increase the cash reserve ratio (CRR) from time to time. Thus, in 1970s through the mid-1980s, monetisation of the fiscal deficit exerted a dominant influence on monetary policy with inflationary consequences of high public expenditure necessitating frequent recourse to CRR.

So far as the market borrowing is concerned, to facilitate the process, interest rates were administered and were kept at an artificially low level. The entire structure of interest rates was complicated and had multiple layers. Thus, the financial markets were highly segmented and lacked depth. The administered interest rate regime was an impediment to the use of indirect tools like open market operations (OMO). The only way to finance the borrowing programme of the government was to increase the statutory liquidity ratio (SLR) from time to time. The exchange rate was not market-determined and movements of foreign exchange in and out of India were tightly regulated. In short, monetary policy in India during this period was completely subservient to the fiscal stance of the central government.

■ **Period during 1985-1998:** Monetary targeting with a feedback:

The monetary policy of India was shifted to the strategy of 'Monetary Targeting with a Feedback' since 1985-86 on the basis of the recommendation of Chakravarty Committee or the Committee to Review the Working of the Monetary System in India in 1985. The traditional way of examining the reason behind this shift in the strategy of monetary policy would be to look at the stability of demand for money and also the relative magnitudes of shocks to the financial and the real sector in a country. The early literature on demand for money in India generally indicated its stability. At the same time, the administered interest rate structure, the absence of significant innovations in the financial sector and the lack of large cross-border capital flows ruled out large shocks in the financial sector relative to the real sector. Further, some other studies also indicated that the money multiplier in India could be predicted with a fair degree of accuracy. This stable relationship between the operating target of reserve money and the intermediate target of money supply was another crucial piece of evidence that led to the adoption of this monetary targeting approach.

It may be noted that studies based on Germany have pointed out that Monetary Targeting (MT) could facilitate internal and external coordination problems for the Central Bank. Interestingly, as our earlier discussion reveals, India's adoption of MT also supports this theory. The Chakravarty Committee, in fact, suggested a formal structure of coordination, proposing an agreement between the central government and the RBI on the level of monetary expansion and the extent of monetisation of the fiscal deficit. It also observed that without such coordination, the RBI's efforts to contain money supply within the limit set by the expected increase in output could become impossible.



The concept of 'monetary targeting with feedback' as recommended by the Chakravarty Committee was, however, different from traditional MT with fixed monetary growth as a rule. It recommended that the targeted monetary growth should be modified or adjusted from time to time based on the information available on expected increase in output and a tolerable rate of inflation. Thus, the monetary policy framework in India between 1985-86 and 1997-98 could broadly be classified as a "flexible monetary targeting approach", with M_3 growth as a nominal anchor, reserve money as the operating target and bank reserves as the operating instrument. It is interesting to note that despite the move towards MT, no specific monetary target in India was set during the second half of the 1980s, except for fixing a ceiling linked to the average growth of broad money in the previous years.

However, during the late 1980s steps were taken to create an active money market. To activate the shorter end of the money market, treasury bills of 182 days' duration were introduced. This period also saw the introduction of financial instruments such as certificates of deposit and commercial paper. In addition, the Discount and Finance House of India (DFHI) was set up to provide liquidity to these instruments by creating a secondary market.

Monetary Policy Linkage & Operating Framework during 1985-98

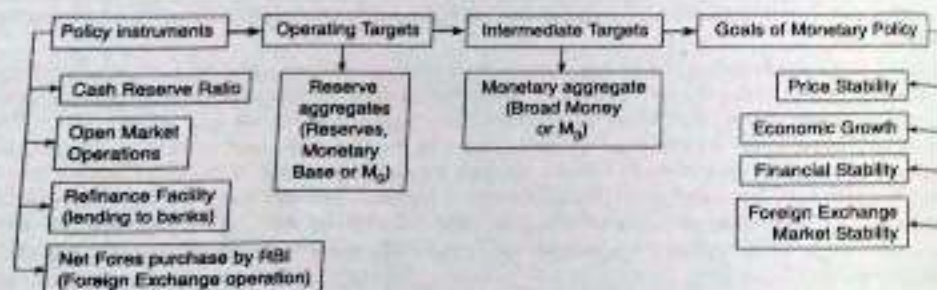


Chart - 1

While these structural changes were going on, the deficit situation in India did not improve. The chronically high fiscal deficit was one of the major causes that led to the balance of payments crisis of the Indian economy in 1990-91. To help the government's borrowing programme, the RBI had to increase SLR while to mitigate the deleterious effect on prices, the only effective tool it had in its possession was CRR. By the end of the year 1990-91, the CRR and the SLR were 15.0% respectively. One of the first important financial reforms that India introduced after the balance of payments crisis in 1990-91 was to change to a market-determined exchange rate system and to introduce current account convertibility in a phased manner. This change was one of the striking successes of the early years of economic reforms. The balance of payments crisis was also largely mitigated by the end of 1992-93. The phase from 1993-94 to 1997-98, therefore, is the phase where MT was attempted in a comparatively stable environment. After stabilisation of the balance of payments crisis, the liberalisation of interest rates in India gathered momentum. Significant changes also took place in the Indian capital market during this period, leading to a substantial improvement in market capitalisation, liquidity and efficiency of the Indian capital market. The successful stabilisation policy and gradual opening-up of the economy with a market-determined exchange rate led to huge capital flows. Net foreign assets of RBI as a ratio of reserve money increased continuously during 1991-2005 (from about 0.12 in 1990-91 to about 1.25 in 2004-05). To maintain the monetary target, it was necessary to sterilise these flows.



Concurrently, with the changes in the administered interest rate regime and other consequent financial innovations, the stability of money demand in India became a matter of concern. The Report of the Working Group on Money Supply: Analytics and Methodology of Compilation (RBI, 1998), popularly known as the Reddy Committee (under the chairmanship of Y.V.Reddy), also examined this aspect in their report.

India's tryst with MT ended almost immediately after the agreement between the government and the RBI to check automatic monetization of budget deficit within a defined limit.

Policy Framework (1998-2016) : Multiple Indicator Approach (MIA) :

Since interest rates were deregulated in the mid-1990s and the Indian economy was getting increasingly integrated with the global economy, therefore, the RBI began to deemphasize the role of monetary aggregates and implemented a multiple indicator approach (MIA) to monetary policy in 1998 encompassing all economic and financial variables that influence the major objectives of monetary policy. The new system was based on the recommendations of RBI's Working Group on Money Supply (or the Reddy Committee, 1998). These variables included several quantity variables such as money, credit, output, trade, capital flows, and fiscal indicators as well as rate variables such as interest rates, inflation rate and the exchange rate. The MIA was later augmented (Augmented MIA or AMIA) under the guidance of RBI's Governor Mr. Bimal Jalan. Under the AMIA, several forward looking variables and time series models were included in the framework.

Alternative targets available with RBI & the reasons for not adopting those policies :

In addition to MIA, possible other options were exchange rate targeting, interest rate targeting and inflation targeting (IT). In the Indian context, exchange rate targeting was not appropriate at that time due to the relatively closed nature and large size of the economy (the large size of the domestic market compared to total exports or imports suggests that the exchange rate channel may not be an influential channel). Similarly, stickiness in long-term interest rates was a major impediment to considering an interest rate targeting framework seriously. Again, IT, in contrast, was a serious option. It is, therefore, relevant to discuss why India did not adopt IT at that time: (i) Fiscal dominance was considered a serious problem, (ii) Supply shocks and the role played by prices of a few crucial administered commodities in overall price formation were perceived as an important tool, (iii) Lack of an official core inflation measure further compounded the problem [there was no single consumer price index to represent the entire group of consumers], (iv) As inflation in India was moderate all along, the political desire for a major change in the framework was conspicuously absent during the late 1990s.

The transition to MIA : This was arguably a compromised outcome of monetary policy reforms. This approach has been followed since April 1998. In this approach, besides monetary aggregates, information pertaining to a range of rates of return in different financial market segments along with the movements in currency, credit, the fiscal position, merchandise trade, capital flows, the inflation rate, the exchange rate, refinancing and transactions in foreign exchange, which are available on a high frequency basis, is juxtaposed with data on output and the real sector activity for drawing policy perspectives.



The operating framework of AMIA was as follows:

Operating Framework of AMIA

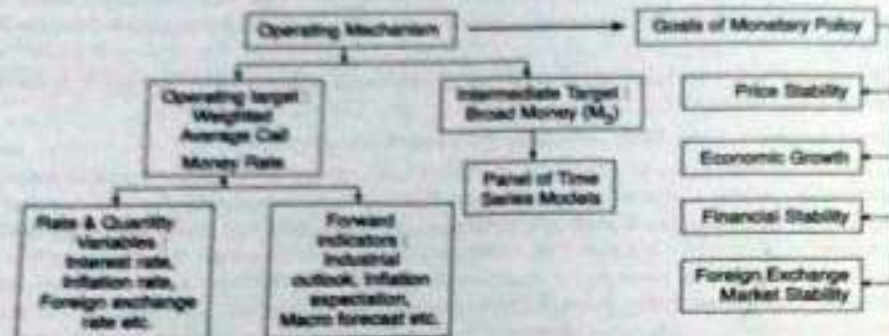


Chart-2

In face of the financial crisis during 2008 the single most important concern that Indian government needed to address is the liquidity issue. The RBI had in its arsenal a variety instruments to manage liquidity, viz., CRR, SLR, OMO, LAF, Refinance to banks, and Market Stabilization Scheme (MSS). Through the judicious combination of all these instruments, the RBI was able to ensure more than adequate liquidity in the system.

In May 2011, the weighted average call money rate (WACR) was explicitly recognized as the operating target of monetary policy while the repo rate was made the only one independently varying policy rate. The weighted average call rate (WACR) represented the unsecured segment of the overnight money market and was supposed to be the best reflection of systemic liquidity mismatches at the margin; and this WACR was explicitly chosen as the operating target of monetary policy in India. An interest rate corridor, the liquidity adjustment facility (LAF), has been defined since May 2011 by the interest rate on the marginal standing facility (MSF) as the upper bound (ceiling), the fixed overnight reverse repo rate as the lower bound (floor) and the policy repo rate remaining in between as shown below. (Fig.-4.6)

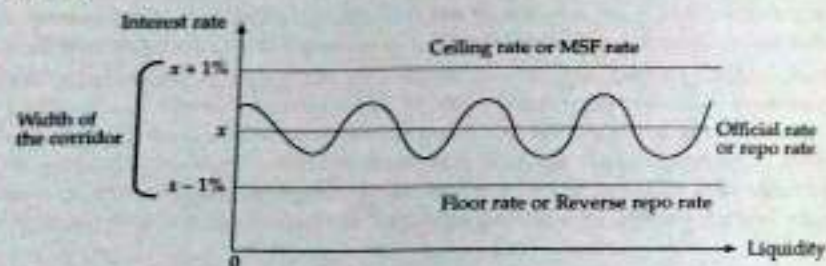


Fig.-4.6

The MSF which was announced by the RBI during 2011-12, facilitated all commercial banks to borrow overnight up to 1% of their net demand and time liabilities from the RBI. The interest rate for MSF was fixed 1% above (or 100 basis points above) the repo rate. These measures improved the implementation and transmission of monetary policy.

It becomes clear from our foregoing discussion that the AMIA included several quantity variables such as money, credit, output, trade, capital flows, fiscal indicators as well as rate variables such as interest rates, inflation rate and the exchange rate. The information on these variables provided a data-based monetary policy formulation, which not only encompassed a diverse set of information, but also accorded flexibility to the conduct of monetary management. In addition to the economic and financial variables, the AMIA included some forward looking variables and a panel of time series models.

The forward looking indicators were drawn from RBI's industrial outlook survey, capacity utilization survey, inflation expectations survey and professional forecasters' survey. All the variables together with time series models provided the projection of growth and inflation while RBI provided the projection for broad money (M_2) and treated this as the intermediate target.

After the adoption of the MIA, there have been major changes:

The first related to the signaling aspect of monetary policy. The RBI once again undertook the task of creating a corridor for the short-term money market rate in a phased manner, finally enabling to carry out liquidity management in India through open market operations (OMOs) and reverse repo/repo operations.

The second major change was in the evolution of policy coordination, culminating in the Fiscal Responsibility and Budget Management Legislation. The objective of the legislation was to impose fiscal discipline on government spending and ensure a transparent and accountable fiscal system.

The third major change was in clearer demarcation of stabilisation policies from structural policies. Earlier, major monetary policy announcements in India used to take place twice a year. As stabilisation of financial markets often needed quick and immediate action, it was repeatedly articulated by the RBI management that necessary policies for that purpose would be taken immediately and certainly not after a long wait of six months. This, however, did not apply to policies that had long-run structural implications.

Again, it is important to note that in USA, the FED used to purchase huge amount of government bonds from the market to overcome the recessionary situation (say, after the financial crisis of 2008 or during the COVID period) through quantitative easing and pumping in liquidity in the economy. The FED rate was quite low and the investors of USA found Indian or Asian capital market quite attractive because of higher return on investment in terms of higher interest rate. However, when the crisis was over the Fed announced in 2013 that it would be reducing (tapering) the pace of its purchases of Treasury Bonds to reduce the amount of money it was feeding into the economy. As a result, the market price of Treasury Bonds declined implying a surge in yield on US treasury Bonds. This impact is known as 'Taper tantrum' in financial market. Now, as the interest rate (FED rate) on US Treasury Bonds was rising, the foreign investors with a better expected return on their investment in US capital market pulled out their funds from Indian capital market. In the immediate aftermath of the taper tantrum in 2013, India experienced portfolio outflows aggregating to ₹ 79,375 crore from capital markets, including ₹ 19,165 crore from equity markets and ₹ 60,210 crore from debt markets during May-August, 2013. As a result, the value of Indian currency in terms of USD depreciated by more than 15%. This situation forced the RBI to raise the interest rate. Side by side, due to huge depreciation of Indian currency, imports became more costly and this led to cost-push inflation in India. During that period several other emerging economies like Brazil, Indonesia, and Turkey also experienced huge capital outflow and inflationary pressures. Hence, that created the ground for 'inflation targeting' as the policy option for the RBI.

• Monetary Policy since 2016 : Shift towards inflation targeting

The importance of focusing on inflation was first highlighted in the Report of the Committee on Financial Sector Reforms (2009) under the Chairmanship of Dr. Raghuram Rajan, former Governor, RBI. The report recommended that RBI can serve the cause of growth by fixing its target to control



inflation and intervening in currency markets only to limit excessive volatility. The report pointed out that inflation control is also inclusive in character because the poorer sections are least hedged against inflation. Former RBI Governor Dr. Raghuram Rajan set up an Expert Committee in 2013 to Review and Strengthen the Monetary Policy Framework (2014) under the Chairmanship of Dr. Uja K. Patel. Some issues central to the report were: (i) selecting the nominal anchor for monetary policy, (ii) defining the inflation metrics and (iii) specifying the inflation target.

In this context, the concept of a nominal anchor must be briefly explained. A nominal anchor is central to a credible monetary policy framework as it ties down the price level or the change in the price level to attain the final goal of monetary policy. It is a numerical objective that is defined for a nominal variable to signal the commitment of monetary policy towards price stability. Generally five types of nominal anchors have been used, viz., monetary aggregates, exchange rate, inflation rate, national income and price level. The Expert Committee recommended inflation to be the nominal anchor of the monetary policy framework in India. Further, low and stable inflation is a necessary precondition for sustainable high growth and inflation is also easily understood by the public.

Regarding the inflation metrics, the Committee recommended that RBI should adopt the all India CPI (combined) inflation as the measure of the nominal anchor. This is to be defined in terms of headline CPI inflation, which closely reflects the cost of living and influences inflation expectations relative to other available metrics. CPI is also easily understood as it is used as a reference in wage contracts and negotiations. Headline inflation was preferred against core inflation (headline inflation excluding food and fuel inflation) since food and fuel comprise more than 50% of the consumption basket and cannot be discarded. In India, CPI (combined) was introduced in 2011 with base period of 2010. Thus, in 2014 the RBI agreed to consider CPI (combined) based headline inflation rate as the nominal anchor.

The monetary policy flowchart during this time period can be depicted in chart 3 as follows:

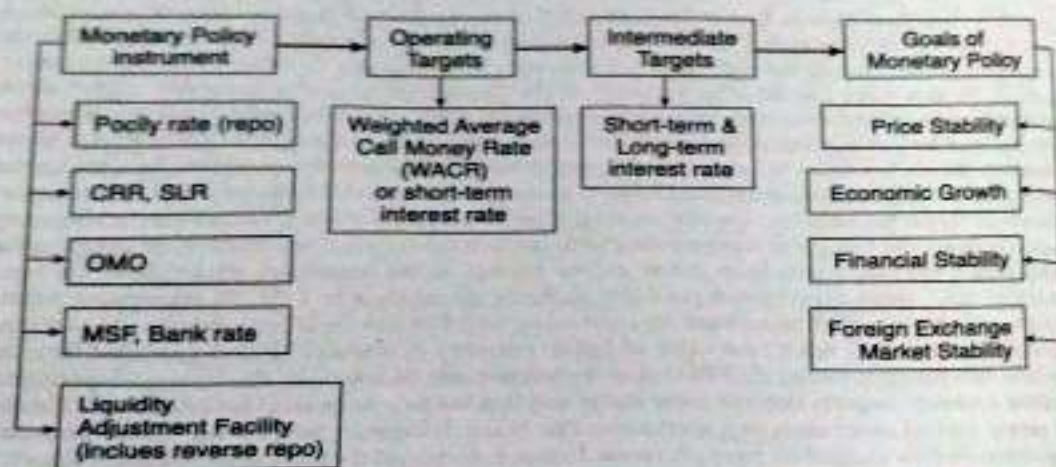


Chart-3

The Committee recommended the target level of inflation at 4% with a band of $\pm 2\%$ around it. The tolerance band was formulated in the light of the vulnerability of the Indian economy to supply and external shocks and the relatively large weight of food in the CPI basket. The Expert Committee also recommended that decision-making should be vested in a Monetary Policy Committee (MPC). [The

2016 Act, 2016 provides for a statutory and institutionalised framework for a six-member Policy Committee (MPC) to be constituted by the Central Government by notification in the Official Gazette. The Central Government in September 2016 thus constituted the MPC with three non RBI including the Governor as Chairperson and three internal members as per Gazette notification dated September 29, 2016. After the implementation of the Committee's recommendation, India joined the group of countries which follow inflation targeting as the convention of monetary policy.

Some of the key features of the RBI Monetary Policy adopted since 2016 are:

1. Liquidity management remains the operating procedure of monetary policy; the weighted average call rate (WACR) continues to be its operating target.

2. The liquidity management corridor is retained, with the marginal standing facility (MSF) rate as an upper bound (ceiling) and the fixed reverse repo rate as the lower bound (floor), with the policy repo rate in the middle of the corridor. The width of the corridor is now 50 basis points (or 0.5%) the reverse repo rate being 25 basis points below the repo rate and the MSF rate being 25 basis points above the repo rate.

3. Instruments of liquidity management continue to include fixed and variable rate repo/money market operations, outright open market operations, interest rate swaps and other instruments as may be deployed from time to time to ensure that the system has adequate liquidity at all times.

4. **Forex swap**: The Forex swap, or Forex rollover, is a type of interest charged on positions held overnight on the Forex market. A similar swap is also charged on contract for differences (CFDs). The charge is applied to the nominal value of an open trading position overnight. Depending on the swap rate and the position taken on the trade, the swap value can be either negative or positive. In other words, an individual will either have to pay a fee or he will be paid a fee for holding his position overnight.

Swap rates are changed when trading takes place on leverage. The reason for this is that when anyone opens a leveraged position, then he is essentially borrowing funds to open the position. In the Forex market, for example, every time anyone opens a position he is effectively making two trades, viz., buying one currency in the pair and selling the other. In order to sell one of the currencies that individual is effectively borrowing that amount to sell, which leads to the need to pay interest on the amount borrowed. The currency that anyone is buying, however, will earn him interest.]

It is often asked that how can the rate of inflation in India be reduced further and brought completely into line with that of the developed economies, and has monetary policy any role in this process? An examination of the trend relating to core inflation (based on WPI) suggests that other than ensuring financial stability, monetary policy will have a limited additional role in this process. The task for aligning the rate of inflation further primarily rests on fiscal, administrative and competition policies that should orient more and more towards the micro level.

4.2.4. Transmission Mechanism of the Monetary Policy

Making a policy does not guarantee that its effects will be felt in the economy. It is important to be sure about the transmission mechanism of that policy. Monetary policy transmission is the process through which changes in monetary policy affect economic activity in general and the price level in particular. As RBI uses the short-term interest rate as the policy instrument for the conduct of monetary policy, its transmission is thus the process through which the change in the policy rate (viz. the repo rate) is transmitted first to the short-term money market rate, and then to the entire range of interest rates covering the money and bond markets, and the deposit and lending rates of commercial banks.



These impulses, in turn, impact consumption (private and government), investment and net exports, which affect aggregate demand and hence output and inflation in the economy. There are five channels of monetary transmission – (i) interest rate channel; (ii) exchange rate channel; (iii) asset price channel; (iv) credit channel and (v) expectations channel.

- (a) **Interest rate channel** : In this case, the RBI changes the official short-term interest rate or repo rate. If it is raised to check inflation then the cost of borrowing increases for the commercial banks. So, their marginal cost of fund-based lending rate also increases. It reduces the investment demand and hence, the demand for different factors of production. It also reduces the demand for bonds in the bond market. The bond price may fall implying an increase in the interest rate on bonds. With the rise in repo rate, the interest rate on deposits also rises.
- (b) **Exchange rate channel** : Monetary transmission takes place through this channel when changes in monetary policy impact (i) the interest rate differential between domestic and foreign rates leading to (ii) capital flows (inflow or outflow) which, in turn, (iii) affects the exchange rate and hence the relative demand for exports and imports.
- (c) **Asset price channel** : Transmission through the asset price channel occurs when changes in monetary policy influence the price of assets such as equity and real estate that lead to changes in consumption and investment. A change in prices of assets can lead to : (i) a change in consumption spending due to the associated wealth effect. For example, if interest rates fall, people may consider purchasing assets that are non-interest bearing such as real estate and equity. (ii) A rise in demand for these assets may result in higher prices, a positive wealth effect and thus higher consumption. (iii) Further, if equity prices rise, the market value of the firms will rise and the firms may increase investment spending.
- (d) **Transmission through the credit channel** : This transmission happens if monetary policy influences the quantity of available credit. This may happen if the willingness of financial institutions to lend is influenced due to a change in monetary policy. Further, debt obligations of businesses may also change due to a change in the interest rate. (For example, if the policy rate falls, debt obligations of firms may decrease, and this will improve their balance sheets). As a result, financial institutions may be more willing to lend to businesses, thus increasing investment spending.
- (e) **Expectations channel** : Monetary policy changes can impact public expectations of output and inflation and accordingly, aggregate demand can be impacted via the expectations channel. For instance, expected future changes in the policy rate can impact medium-term and long-term expected interest rates through market expectations and thus affect aggregate demand. Further, if inflation expectations are firmly anchored by the Central Bank, this would imply price stability.

● Transmission Lags in Monetary Policy :

The transmission mechanism is beset with lags. There are basically two components of the transmission mechanism. The first is how far the signals sent out by RBI are picked by the banks and the second is how far the signals sent out by the banking system impact the real economy. The first component can be called the 'inner leg' and the second the 'outer leg'.

Let us examine some recent data to have an idea about the lags. If take repo movements, we find that there was a total reduction in the policy repo rate by 135 basis points between February, 2019 and January, 2020. During this period, transmission to various money and bond markets ranged from 146 basis points in the overnight call money market to 73 basis points in the market for 5-year government securities and to 76 basis points in the market for 10-year government securities. Transmission to the credit market was also modest with the weighted average lending rate (WALR) on fresh rupee loans sanctioned by banks falling by 69 basis points during February to December, 2019.

4.3.3 Unconventional Policy measures

We have so far discussed the conventional measures of monetary policy. If the conventional measures fail to bring the desired results, then the central banks may employ unconventional monetary policy tools. Unconventional monetary measures target financial variables other than the short-term interest rate such as liquidity, credit spreads (e.g. interest rates on risky assets) and asset prices. The objective of unconventional tools is to supplement the conventional monetary policy tools especially in the slowing cycle to boost economic growth.

In the recent past, RBI has used various unconventional tools in addition to conventional monetary policy measures. Broadly, unconventional measures can be classified into four categories : (i) large-scale asset purchases, (ii) lending operations, (iii) forward guidance and (iv) negative interest rates. Large-scale asset purchase by a Central Bank involves purchase of long-term government securities financed by crediting reserve accounts that commercial banks hold at the Central Bank.

Lending operations involve provision of liquidity to financial institutions by RBI through the creation of new or extension of existing lending facilities. For example, we may have expansion of the set of eligible collateral, extension of the maturity of the loan etc.

Forward guidance implies a situation where RBI is communicating future policy intentions and commitments regarding the policy rate to influence policy expectations. Forward guidance is given routinely by most Central Banks.

A negative interest rate implies that an interest rate is charged on the reserves that commercial banks hold at the central bank. Thus, instead of paying the commercial banks an interest on reserves kept with RBI, the RBI charges some interest on such reserves (over and above certain ceiling). Then, the banks may be induced to reduce their excess reserves and increase the amount of their lending.

4.3. Monetary Management (Monetary Policy) in Open Economy

The context of monetary management finds its theoretical dispensation as derived from the standard framework of macroeconomic analysis first envisaged by J. M. Keynes and later on extended further by H. R. Hicks and Hansen. To this end it is duly worth looking to the theoretical innovation popularly known as Mundell-Fleming model.

Robert A. Mundell and J. Marcus Fleming aimed at explaining the short-run fluctuations in a small open economy. An economy is considered to be small when it cannot influence the world market prices through its trading operations. It is an open economy in the sense that it is involved in export-import business.

The Mundell-Fleming model assumes :

- (i) A small open economy with perfect capital mobility, and
- (ii) Given prices of goods and services both at home and foreign markets.

The assumption of perfect capital mobility implies that the interest rate in the home market (say, r) of the small open economy is determined by the interest rate prevailing in the world capital market (say, denoted by r^*). Thus, the small open economy cannot influence the interest rate prevailing in the world capital market. If a decline in domestic savings leads to excess demand for capital in the small open economy and $r > r^*$ then foreign capital will start flowing to that economy to earn additional rate of return (say, through the purchase of bonds). This will cause the bond price to rise and hence a fall in the domestic interest rate until $r = r^*$. In a similar fashion, if domestic savings become more than domestic investment then there will be excess supply of capital in the small open economy, and



$r < r^*$. This will cause an outflow of capital from the small economy (to earn higher return in the foreign capital market). This will lead to sale of domestic bonds and hence to a rise in domestic interest rate until $r = r^*$.

Hence, this model assumes that the international flow of capital is rapid enough to keep the domestic interest rate equal to the interest rate prevailing in the world capital market.

Product market equilibrium in the small open economy :

In the Mundell-Fleming model, the product market equilibrium where aggregate demand for goods and services becomes equal to the aggregate supply of goods and services can be expressed as follows:

$$Y = C(Y - T) + I(r) + G_0 + X(e, Y^*) - M(e, Y) \quad \text{..... (1)}$$

Where $C(Y - T)$ = Aggregate consumption expenditure that depends on the disposable income $(Y - T)$, and here it is assumed that $0 < \frac{\partial C}{\partial (Y - T)} < 1$;

$I(r)$ = Aggregate private investment expenditure that depends upon the interest rate, and $\frac{dI}{dr} = I_r < 0$;

G_0 = Aggregate expenditure of the government (assumed to be given) ;

X = Aggregate exports that depends on the foreign exchange rate (e) and the foreign income (Y^*);

Here, foreign exchange rate in the small open economy is defined as the amount of foreign currency per 1 unit of home currency, e.g. if \$1 = ₹ 62 the exchange rate (e) will be $\frac{1}{62}$ = ₹ 1. If e falls, say, from

$\frac{1}{62}$ = ₹ 1 to $\frac{1}{65}$ = ₹ 1, it would imply a depreciation of the domestic currency; on the other hand, if

e rises from $\frac{1}{62}$ = ₹ 1 to $\frac{1}{60}$ = ₹ 1, it would imply an appreciation of the domestic currency. Now, if

Y^* is exogenously given and there is fixed exchange rate in the small open economy (the monetary authority is supposed to maintain this fixed exchange rate through the purchase and sell of foreign currency at a given exchange rate), then we get a given level of exports, say, $X = X_0$ in the small open economy at any particular time.

Again, M = Aggregate imports that depends upon the domestic income (Y) and the foreign exchange rate (e). Under fixed exchange rate system, $M = M(Y)$ and the import function can be expressed as:

$M = M_0 + m.Y$ where M_0 = Autonomous imports that remains independent of Y , and $\frac{dM}{dY} = m > 0$

Here, the trade balance (TB) = $X - M = X_0 - M_0 - m.Y$

Now, the product market equilibrium can be expressed as :

$$Y = C(Y - T) + I(r) + G_0 + X_0 - M_0 - m.Y$$

$$\text{Or, } Y - C(Y - T) - G_0 - I(r) = X_0 - M_0 - m.Y$$

$$\text{Or, } S(Y) - I(r) = X_0 - M_0 - m.Y \quad [\text{Since, } Y - C(Y - T) - G_0 = \text{Aggregate savings in the economy} = S(Y)]$$

$$\text{Or, } S(Y) - I(r) - X_0 + M_0 + m.Y = 0 \quad \text{..... (2)}$$



equation (2), different combinations of r and Y which keep the product market at equilibrium can be represented by the IS curve. The slope of this IS curve can be derived as follows:

From total differentiation of equation (2) we get,

$$\frac{\partial S}{\partial Y} dY - \frac{\partial I}{\partial r} dr + \frac{\partial M}{\partial Y} dY = 0$$

$$\text{Or, } S_Y dY - I_r dr + M_Y dY = 0$$

$$[\text{where } \frac{\partial S}{\partial Y} = S_Y; \frac{\partial I}{\partial r} = I_r; \frac{\partial M}{\partial Y} = M_Y = m]$$

$$\text{Or, } dY [S_Y + M_Y] = I_r dr$$

$$\text{Or, } \frac{dr}{dY} = \frac{S_Y + M_Y}{I_r} < 0 \quad \text{..... (3)}$$

$$[\text{since } \frac{\partial S}{\partial Y} = S_Y > 0; \frac{\partial I}{\partial r} = I_r < 0; \frac{\partial M}{\partial Y} = M_Y > 0]$$

Thus, the IS curve will be negatively sloped (See Fig. 4.7)

Money market equilibrium :

The money market remains at equilibrium when aggregate demand for money (real balance) becomes equal to the aggregate supply of money. Let the aggregate supply of the real balance in the small open

economy be fixed by the monetary authority of the country and it is fixed at $\left(\frac{M}{P}\right)^S = \left(\frac{M}{P}\right)^S$. On the

other hand, aggregate demand for money consists of (i) Transaction demand for money : $L_1 = L_1(Y)$, where $\frac{dL_1}{dY} = L_Y > 0$, and (ii) Speculative demand for money : $L_2 = L_2(r)$, where $\frac{dL_2}{dr} = L_r < 0$. Thus,

the aggregate demand for money can be expressed as : $\left(\frac{M}{P}\right)^d = L(Y, r)$

Hence, equilibrium in money market can now be represented as : $\left(\frac{M}{P}\right)^S = \left(\frac{M}{P}\right)^d$

$$\text{Or, } \left(\frac{M}{P}\right) = L(Y, r) \quad \text{..... (4)}$$

In equation (4), different combinations of r and Y which keep the money market at equilibrium can be represented by the LM curve. The slope of this LM curve can be derived as follows :

From the total differentiation of equation (4) we get :

$$0 = \frac{\partial L}{\partial Y} dY + \frac{\partial L}{\partial r} dr$$

$$\text{Or, } 0 = L_Y dY + L_r dr$$

$$\text{Or, } \frac{dr}{dY} = -\frac{L_Y}{L_r} > 0 \quad \text{..... (5)} \quad [\text{since } L_Y > 0, L_r < 0]$$

Hence, the LM curve will be positively sloped (See Fig. 4.8).

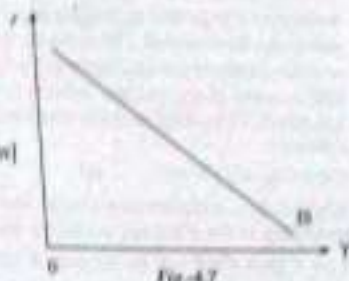


Fig. 4.7

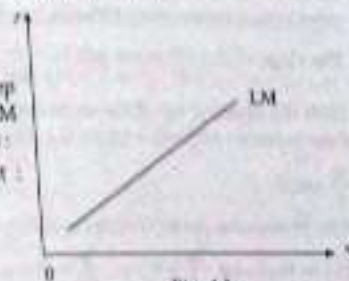


Fig. 4.8



Foreign exchange market equilibrium:

Equilibrium in the foreign exchange market suggests the equality between the aggregate demand for foreign exchange and aggregate supply of foreign exchange in the small open economy during any particular time period. The demand for foreign currency arises because of higher import payments, and the supply of foreign exchange reflects the export earnings of the country. The balance of payments (BP) account of the country reflects this supply-demand condition taking into account both capital account (CA) balance and the trade balance (TB). The capital account (CA) balance is expressed as follows:

$$CA = CA_0 + k(r - r^*) \quad (6)$$

where CA_0 = Autonomous capital flow which is independent of $(r - r^*)$ gap; r = Rate of interest prevailing in the domestic economy; and r^* = Rate of interest prevailing in the foreign economy.

If $r > r^*$ then there will be net capital inflow and the country will have a positive balance in CA.

If $r < r^*$ then there will be net capital outflow and the country will have a negative balance in CA.

We know that the trade balance is expressed as:

$$TB = X - M = X_0 - M_0 - mY \quad (7)$$

$$\text{Therefore, } BP = CA + TB \quad (8)$$

At equilibrium, $BP = 0$, i.e. if there remains negative balance in CA, there must be positive balance in TB; and if there remains positive balance in CA, there must be negative balance in TB.

So, at BP equilibrium, we have

$$BP = (X_0 - M_0 - mY) + CA_0 + k(r - r^*) = 0$$

$$\text{Or, } k(r - r^*) = -(X_0 - M_0 - mY) - CA_0$$

$$\text{Or, } k(r - r^*) = -(X_0 - M_0 + CA_0) + mY$$

$$\text{Or, } (r - r^*) = -\frac{1}{k}(X_0 - M_0 + CA_0) + \frac{m}{k}Y$$

$$\text{Or, } r = r^* - \frac{1}{k}(X_0 - M_0 + CA_0) + \frac{m}{k}Y \quad (9)$$

In equation (9), given the values of r^* , k , m , X_0 , M_0 and CA_0 , different combinations of r and Y which keep the balance of payments account at equilibrium can be represented by the BP curve (See Fig. 4.9).

The slope of the BP curve will be: $\frac{dr}{dY} = \frac{m}{k}$ (10)

With the opening up of the economy, propensity to import rises (i.e. m rises) but with more capital flow between nations, k (showing the intensity of capital flow) may rise faster causing a fall in the $\frac{m}{k}$ ratio.

If there remains perfect capital mobility, as assumed in the Mundell-Fleming model, $k = \infty$ (infinity),

and in that case $\frac{m}{k} = 0$, i.e., $\frac{dr}{dY} = \frac{m}{k} = 0$, and the BP curve will be horizontal (See Fig. 4.9).

Now, the combination of r and Y [viz. (r^*, Y^*)] which maintain equilibrium simultaneously in product market, money market and foreign exchange market can be shown in Fig. 4.10.

4.3.1. Impact of Monetary policy: Under fixed & flexible exchange rate system

Within the framework of Mundell-Fleming model, we can now analyse the impact of monetary management in such a small open economy. Here we assume at first a fixed exchange rate regime

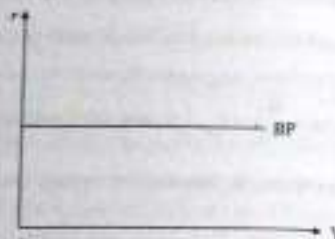


Fig. 4.9



where the monetary authority or the Central bank fixes the foreign exchange rate and stands ready to purchase and sell foreign currency at that fixed exchange rate (say, \$1 = ₹ 62). In this case, the Central Bank needs sufficient reserve of foreign currency as well as domestic currency to make this system operational.

Now, we also assume that the product prices at the domestic market (P) and in the foreign market (P^*) remain constant. Hence, the real exchange rate (E) would be equal to the nominal

exchange rate (r) because $E = r \cdot \frac{P}{P^*}$ (it shows relative price of domestic goods in terms of foreign goods)

If there takes place a monetary expansion then the LM curve would shift to the rightward direction (say, from LM_0 to LM_1) as shown in Fig. 4.11. This causes a fall in r in the domestic economy (A movement from point E to F). Again, a fall in r would raise I and hence, the Y . The rise in Y will raise I causing a negative trade balance and excess demand for foreign currency. The Central Bank (CB) would then sell foreign currency (say, US Dollar) and purchase domestic currency (viz. ₹) to maintain the fixed exchange rate.

It is to be noted that the CB can also follow the policy of sterilization, i.e. with the sale of USD, the CB can also buy bonds to check the fall in money supply. But this procedure cannot be continued for a long time.

Now, with fall in domestic money supply, the LM curve would shift to the leftward direction causing a fall in Y and rise in r until $r = r^*$. Hence, under fixed exchange rate regime, the monetary management becomes ineffective in raising the equilibrium level of Y in this economy.

Let us now consider a flexible exchange rate regime where equilibrium exchange rate is determined through the supply and demand forces in the foreign exchange market.

Let us again consider a monetary expansion causing a rightward shift in the LM curve from LM_0 to LM_1 as shown in Fig. 4.12.

This causes a fall in r in the domestic economy (A movement from point E to F). This fall in r would lead to a situation where $r < r^*$ and this, in turn, would cause a net outflow of capital in the small open economy. So, there would be negative balance in CA causing excess demand for foreign currency. So, there will be a depreciation of the domestic currency (i.e. r will fall).

However, a fall in r would also mean a fall in the real exchange rate (E) since domestic and foreign prices are assumed to remain unchanged. This implies a fall in the relative price of domestic goods in terms of the foreign goods. Hence, the export demand will rise (i.e. net exports will rise and TB will be positive) and in the product market, aggregate demand for the goods and services would rise. This will cause a rightward shift in the IS curve, say, from IS_0 to IS_1 (as shown in Fig. 4.12). Thus, the equilibrium value of Y will also rise (a movement from point F to G) from Y_1 to Y_2 . Hence, monetary expansion becomes most effective under the flexible exchange rate regime.

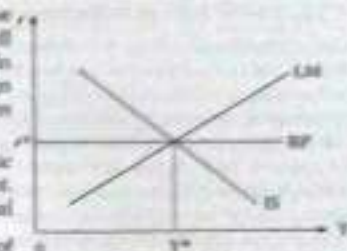


Fig. 4.10

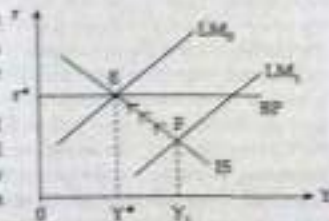


Fig. 4.11

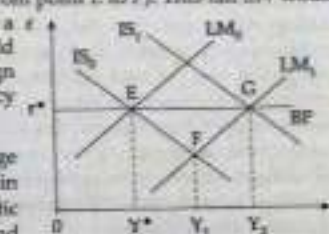


Fig. 4.12



4.3.2. The Notion of 'Impossible Trinity'

One interesting corollary of the Mundell-Fleming model, discussed so far, is about the implication for the degree of freedom that Central Bank will get in making of monetary policy (granted its influencing economy's overall interest rate structure, in particular) when — (a) exchange rate is fixed in nature by being administered by Central Bank and (b) there is perfect mobility of capital across the border. This particular conflict runs fundamentally on the argument derived from Mundell-Fleming framework that — when the capital gets to flow freely across the countries, then international differential in interest rate gets bridged in case the exchange rate is fixed. To put it technically, given r and r^* are respectively the interest rate in home country and that in foreign, any difference between the interest rates gets eliminated through free movement of capital from the country having lower interest rate into the one having higher interest rate, when e (i.e. the exchange rate between home currency and foreign currency) is fixed. The reason behind this phenomenon can be traced out based on the assumption that — **domestic asset and foreign asset are perfect substitutes of each other and investors are averse to risk** (so as to have their investment choice being driven solely by return from investment). Now, in the backdrop of these two premises and exchange rate being fixed, one can afford arguing that, if there arises a situation of r being greater than r^* , investor will be invariably find domestic assets more attractive since they are associated with higher return compared to the foreign counterpart. This in turn will lead the investors to pull out their wealth from foreign assets and park the same in domestic assets and this reallocation process (portfolio reallocation) will continue until the interest rates come to the same level. Now, let us suppose in line with one fundamental assumption of Mundell-Fleming model that the home country is small, so much so that the foreign interest rate is exogenous to the home country. Hence, if the home country's foreign exchange rate is administered, then the domestic interest rate will always remain tied to the foreign interest rate and in that event the Central Bank of the home country will be left with no control over the domestic interest rate. Therefore, in home country monetary policy will be ineffective on the respective interest rate. This essentially suggests that combination of fixed exchange rate system with perfect capital mobility is however opposed to the independence in conduct of monetary policy and the phenomenon is referred to as **'Impossible Trinity'** which means, that it is impossible to attain the combination of — (a) monetary independence, (b) fixed exchange rate or perfect exchange rate control and (c) perfect mobility of capital.

4.3.3. Concept of Sterilization

Already discussed in chapter 1, the term 'sterilization' refers to the purchase and sale of bonds by Central Bank to offset the repercussion of its foreign exchange rate intervention (as what is in case of managed float exchange rate system) on domestic money supply. In event of deficit in external sector or Balance of Payments (BoP) account, when the domestic currency tends to depreciate in terms of foreign currency beyond the Central Bank's desired level, the Central Banks resort to sale of foreign currency from its reserve leading to the potential contraction of monetary base and thereby, domestic money supply. Now to avert this contractionary repercussion Central Banks get into the purchase of bonds to infuse liquidity in the economy. Similarly, in case of surplus in BoP and consequently, having the domestic currency to appreciate as against the foreign currency, Central Bank gets into the purchase of foreign currency from the spot market and sterilizes it by selling bonds to pump out the additional liquidity created thereof.

4.4. Concept of Demonetisation and Its Impact

Meaning: Demonetisation is an act of cancelling the legal tender status of a currency unit in circulation in any country.

Objective: Normally, the government of any country undertakes this policy in circumstances the current economic condition such as

- (i) Containing inflation,
- (ii) Restricting the expansion of black money (or unaccounted money), and
- (iii) Restricting the expansion of fake or counterfeit currency within the economy.

Examples from India: The government of India had also demonetised bank notes on three occasions — (i) in 1946 (i.e. during the pre-independence period), (ii) in 1978 and (iii) in November 2016. In all these cases, the objective was to combat tax evasion and the creation of 'black money' or the 'parallel economy' or 'underground economy' over which the government has no direct control and is exposed to inflationary pressure.

In 1946, the government hoped that such demonetisation would penalise some dishonest business people who tried to evade tax payment through an understatement of the huge amount of profit they earned by supplying the Allies during the Second World War. In 1978, the government of India demonetised banknotes of denominations — ₹ 1,000, ₹ 5,000 and ₹ 10,000. It was believed that this step would check the spread of black money in Indian economy.

Again, more recently, in November 2016 the government of India followed the path of demonetisation by declaring legal tenders viz. ₹ 500 and ₹ 1,000 banknotes as invalid with effect from the mid-night of 8th November 2016. The government also announced the issuance of new ₹ 500 and ₹ 2,000 banknotes in exchange for the old notes. Here also, the objective of the government was to restrict the spread of black money and counterfeit in Indian economy.

In its annual report of March 2016, the Reserve Bank of India (RBI) stated that total bank notes in circulation at that point of time was to the tune of about ₹16.42 trillion (US \$248 billion) of which nearly 86% (around ₹14.18 trillion or US \$210 billion) consisted of currency notes of denominations ₹ 500 and ₹ 1,000. In terms of volume, the report stated that about 24% of the total ₹ 16.42 crore banknotes in circulation were ₹ 500 and ₹ 1,000 banknotes. Further, the Governor of the RBI stated that while the supply of notes of all denominations had increased by 40 per cent during 2011-16, the ₹ 500 and ₹ 1,000 banknotes increased by 76 per cent and 109 per cent respectively, owing to counterfeits.

Impact of demonetisation on Indian economy:

Some of the bankers and government officials supported this bold move of the government and they believed that this step would surely reduce the spread of black economy in India and expand the habit of cashless transaction through, say, credit cards or debit cards, internet banking and so on ensuring more transparency in any monetary transaction.

However, several economists and social scientists were of the opinion that this step had failed to unearth the black assets which mostly consisted of illegal property, bullions and jewellery. In addition, this step had a bad impact, particularly during short-run, upon the aggregate volume of trade and commerce, output and employment.

It is important to note that about 85% of transactions in India used to take place through cash. In that situation cancelling the legal tender character of two high denomination banknotes puts a sudden halt to such transactions. The service sector of our country that contributed about 60 per cent of India's national income and depended mostly on cash transactions was adversely hit because of Demonetisation. Further, about 92% of Indian workers are engaged in unorganized sector where wage payments are made in cash. This demonetisation move also affected most of such common people.



4.4.1. Demonetisation and Money Multiplier

The impact of demonetisation on money supply condition in the overall economy is foregone. To that end, it would be interesting to consider a magnified illustration of the very mechanism through which the aforesaid impact takes its shape. In this regard, it is well appropriate to correlate the reflection of demonetisation on money supply with the idea of money multiplier. Already discussed in chapter 1, money multiplier is a technical term used to signify the effect of an adjustment in monetary base or high-powered money on the aggregate supply of money. Moreover, it has been also pointed out that the magnitude of the multiplier effect of unitary change in monetary base essentially depends on — (a) cash-deposit ratio and (b) required reserve ratio. Thus, understanding the effect of demonetisation on money supply through the lens of 'money multiplier' should ideally rest on the implications of such demonetisation as on cash-deposit ratio and reserve ratio, apart from the case of how demonetisation alters the monetary base. Let us now probe into these implications.

We shall begin with what happens to the monetary base following the introduction of demonetisation. From earlier discussion, it is foregone that monetary base [alternatively said, stock of high-powered money (H)] of an economy essentially comprises — (a) currency notes and coins (C) and (b) reserves held by commercial banks with the central bank (R), given it reflects the net monetary liability of Central Bank or RBI. If a demonetisation occurs leading to the withdrawal of currency of worth ₹ X then C will contract by the same amount and so, H as well. Now, given that demonetised legal tender is channelized to commercial banks as people are required to deposit the banned currency notes at their disposal into banks, the stock of deposits with banking sector will rise by ₹ X. This is however a possibility in as much as there may exist various means of money laundering which are accessed, particularly by those holding illegal or undisclosed wealth, to elude the legal net. So, letting alone the aforesaid case, it can be argued in general that post demonetisation banks will witness a surge in deposit. Now, a part of such this increase in deposit will go to Central Bank as required reserve. Thus, if required reserve ratio is 'α' then following demonetisation the stock of reserve with Central Bank will get to rise by 'αX' rupees. Therefore, net contraction of monetary base comes at $[(1 - \alpha)X]$ rupees and is expressed as:

$$\Delta H = -(1 - \alpha)X < 0 \quad (1)$$

This contraction of H can be interpreted as the primary effect of demonetisation of monetary base. Now, consequently the aggregate supply of money will shrink by:

$$\Delta H' = -\left(\frac{1+\beta}{\alpha+\beta}\right)\Delta H = \left(\frac{1+\beta}{\alpha+\beta}\right)(1 - \alpha)X < 0 \quad (2) \quad \text{since, } 0 < \alpha < 1$$

[Note: the value of money multiplier = $\left(\frac{1+\beta}{\alpha+\beta}\right)$ (see chapter 1/Subsection 1.3.2. & 1.3.5.)]

Now the flip side of this development shows up as potential increase in aversion to cash-holding among people. In this case there will open up another round of adjustment in money supply. Let us now explain this. With people getting averse to cash-holding following demonetisation, there can be two possible outcomes. The first possible outcome is that reduction in cash-holding (indicated by a fall in α) is accompanied by an increase in holding of bank deposit, while the second possibility involves an increase in the purchase of precious commodities like, gold etc. having rising price or value in terms of money. Now in case of increased aversion to cash-holding being associated with rise in bank deposit, money supply will increase through the operation of 'credit multiplier' (already discussed in chapter 1). However, if the second possibility comes into effect then money supply will further contract as commodity savings results in a contraction in the liquidity flow in the economy. However herein, we shall count on the first possibility and thereby, we have the resultant change in money supply as given by:



$$\Delta H'' = \left(\frac{1-\alpha}{\alpha+\beta}\right) H_1 (\Delta \beta) > 0 \quad (3) \quad H_1 = H_0 + \Delta H, \text{ since } \Delta \beta < 0$$

where, H_1 denotes the new monetary base coming after the primary effect of demonetisation being noticed. Thus, overall, the change in money supply resulting from demonetisation can be interpreted as the combination of (2) and (3), as given by:

$$\Delta M = \Delta M' + \Delta M'' = \left[\left(\frac{1+\beta}{\alpha+\beta}\right)(1 - \alpha)\right] + \left[\left(\frac{1-\alpha}{\alpha+\beta}\right) H_1 (\Delta \beta)\right] \quad (4)$$

Now, the sign of (4) depends on which ever of the primary effect (negative in nature) and secondary effect (positive in nature) is relatively stronger. Now, for obvious reason, primary effect is likely to outweigh the secondary effect, so that the net effect of demonetisation on money supply is negative. However, going by the second possibility in terms increased propensity towards commodity saving, the secondary effect will be negative and thereby, the money supply gets to contract invariably following the advent of demonetisation.

Let us now illustrate the aforementioned analysis of the impact of demonetisation in what follows.

In Fig-4.13 it has been shown that economy begins with H_0 level of high-powered money and correspondingly, M_0 level of money supply. Now following a demonetisation taking effect, the stock of high-powered money dips to the level H_1 and consequently, the aggregate money supply in the economy shrinks to M_1 . This contraction in money supply marks the primary effect of demonetisation. Now if such demonetisation dents public's confidence in money holding then the total amount of cash-holding as a proportion to deposit holding will get to decline from β to β'. As a result, the money supply line rotates leftward and accordingly, the new level of money supply comes at M_2 . Hence the net contraction of money supply resulting from demonetisation stands at $M_0 M_2$.

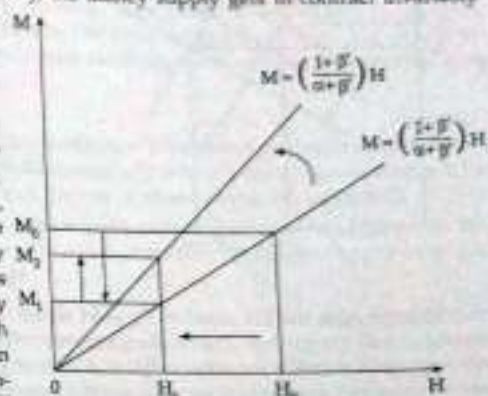


Fig-4.13

4.4.2. Macroeconomic Fallout of Demonetisation

In the previous section we have come across how the move towards demonetisation impacts the domestic money, which finds ways to contraction as general case. Taking cue from this, we shall now proceed to look into how such demonetisation affects the aggregate state of economic activities. In this regard we shall refer to the standard macroeconomic model envisaging the interaction between goods market and money market to explain the determination of aggregate output (Y) and interest rate (r). The basic working of this model is akin to what has already described in the section 4.3. However, herein we shall extend its dispensation to the framework combining aggregate demand (AD) with aggregate supply (AS) [or alternatively said, AD-AS model] in order to reflect on the impact of demonetisation on economy's price level as well. Besides the present analysis of the fallout of demonetisation will branch into: (a) case of closed economy and (b) case of open economy.

• Closed Economy Case :

In case of closed economy aggregate domestic expenditure is geared solely to purchase of domestically produced goods and services and its absorption in turn is confined to domestic economy. Now as hinted in the outset, the determination of Y and r is interactive process engaging goods market (or real sector) and money market (or financial sector). The movement in Y in response to change in r keep with the equilibrium in goods market is illustrated by IS curve having downward slope when Y and r are measured along the horizontal and vertical axis respectively. Similarly, movement in r in response to change in Y is illustrated by LM curve. Hence, equilibrium Y and equilibrium r when combination of Y and r which comes at the intersection between IS and LM curve and equilibrium in r market and money market to be clearing simultaneously. Let us explain on the impact of the demonetisation on Y and r in terms of the following diagram.

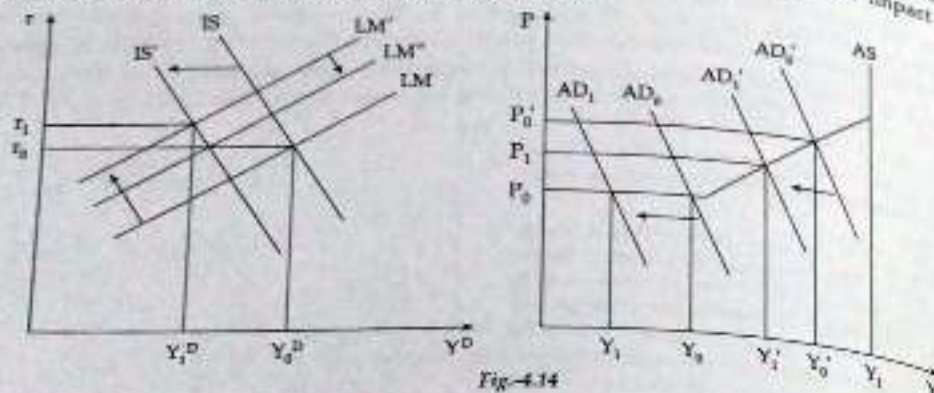


Fig-4.14

We will begin with the left panel of Fig-4.14 which depicts the determination of aggregate output demanded and interest rate. Prior to demonetisation the closed economy, being discussed, is featured with aggregate demand for output Y_0D and interest rate r_0 . Now correspondingly, the right panel demonstrates two possibilities according as the economy is placed on the flat portion of the AS curve or on its upward portion. At this point it is important to mention that the economy's placement on AS curve has got a strong bearing on how far it is situated behind its maximum capacity of production (Y_f) or aggregate output at full employment level. Now, the gap between the full employment output and actual output is what signifies the magnitude of involuntary unemployment along with excess capacity persisting in the economy. Therefore, in case the magnitude of involuntary unemployment is very high and so is the level of excess capacity, it is possible to raise the level of aggregate production or aggregate supply without having to do with increase in price level (P). Hence, under this circumstance, aggregate supply is perfectly elastic to price and accordingly, the AS curve become parallel to the horizontal axis. On the flip side, when economy is producing at its capacity, the aggregate supply becomes completely inelastic to P and accordingly, AS curve become vertical. Hence, it is the intermediate phase, where aggregate supply is elastic to P and thus, we have the AS curve to be upward sloping.

Thus, in case the economy is burdened with massive involuntary unemployment with large amount of excess capacity, the introduction of demonetisation will lead to contraction of aggregate demand from Y_0D to Y_1D . The reason being that demonetisation curtails the level of money supply in the economy to induce people for selling bonds to meet up the want of liquidity, causing the interest rate to shoot [as indicated by the upward shift in LM curve] and thereof, investment to contract. Besides,



demonetisation disrupts the flow of consumption is as much it is mediated through cash-based transactions lowering the level of aggregate demand [as indicated by the leftward shift in IS curve]. Hence, as shown in the right panel of Fig-4.14, AD curve takes a leftward shift from AD_2 to AD_1 and with aggregate supply being perfectly elastic in this case, the closed economy moves leftward along the flat AS curve to settle at lower level of equilibrium aggregate output, Y_1 .

However, in case the economy is not that distant from its full employment output or is near to it, to begin with [so much as that the aggregate supply is elastic to price], then following demonetisation equilibrium aggregate output will fall to Y_1' from Y_0' , along with the price level declining to P_1' from P_0' . Now it is interesting to note that the contraction in aggregate output in this case is lower than what it was when the economy was far off from its full employment position. The reason being that in case the economy faced with a relatively lower output gap, enforcement of demonetisation is associated with a decrease in price level too. Now this in turn acts to partly offset the immediate contraction of aggregate demand owing to demonetisation. The analytical expression of this intuition behind the amount of contraction in equilibrium aggregate output being relatively lower, can be traced out by letting LM to shift downward from LM' to LM'' [led by a fall in P due to demonetisation and consequently a rise in real money supply]. However, such interim improvement in aggregate demand due to deflation will not be able to fully offset its initial contraction. Thus, it is clear that a effect of demonetisation.

• Open Economy Case :

We shall discuss the macroeconomic fallout of demonetisation in case the economy is open by having to do with commodity and financial trade. This discussion will follow from the one in section 4.3 as far as its backdrop is concerned and will draw on the one of closed economy case as well.

Here, we assume that the exchange rate of the home country is flexible in nature and there is perfect mobility of capital. Let us now explain the impact of demonetisation in home country in terms of the following diagram.

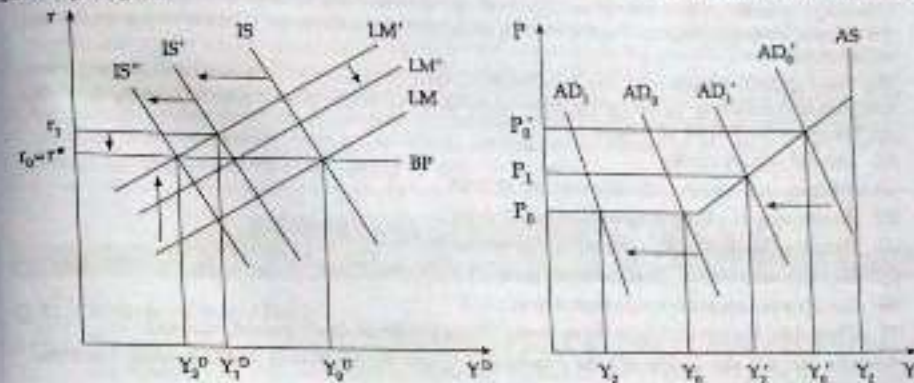


Fig-4.15

In Fig-4.15, we get to observe that immediate impact of demonetisation remains the same as what it is in case of the closed economy. However, as the domestic interest rate overshoots the foreign interest rate, there happens a massive inflow of foreign capital due to domestic assets getting more lucrative than foreign assets. Note that, the process of portfolio reallocation from foreign assets to domestic assets continues until the interest rates get equalized [i.e., $r = r^*$]. Now, this in turn causes net inflow of foreign exchange leading to the appreciation of domestic currency. As a result, home country's

export gets costlier in foreign currency while having imports falling cheaper in home currency. Thus, net export of home country comes under a contraction letting the aggregate demand in home to shrink. This is what is indicated by the leftward shift in IS curve from IS' to IS'' and thus the level of aggregate demand in the home country comes down to Y_2D from Y_1D . Therefore, the degree of contraction of aggregate demand in open economy following demonetization exceeds the level it happened in case of closed economy. Therefore, equilibrium aggregate output declines from Y_1 to Y_2 or from Y_1 to Y_2' , according as the economy is situated on the flat portion of AS curve or on its rising part.

Hence, a move towards demonetization in open economy will result in larger contraction of equilibrium aggregate output compared to closed economy as under the flexible exchange rate and perfect capital mobility.

[Note : If the condition of flexible exchange rate is replaced by that of fixed exchange rate, there would not be any change in what has been the potential outcome of demonetization on real economic activities. However, the magnitude of decline in equilibrium aggregate output would be lower. The reason being that as Central Bank would come to counter the appreciation of exchange rate due to the increased supply of foreign exchange led by inflow of capital. As a result, net export would remain unaffected and hence IS curve would not take further leftward shift. Moreover, LM curve would shift downward (as indicated in Fig-4.15) to reflect the expansion of monetary base consequent upon Central Bank's purchase of foreign exchange in excess supply.]



Summary



Central Bank is the bank that is given the power to supervise all the other banks in the country and the overall monetary system.

The functions of a Central bank are : (1) issuing paper notes, (2) acting as a banker to the Government, (3) acting as a banker to the other banks, (4) controlling the amount of credit created by banks, (5) stabilising the value of money, (6) supervising the working of financial institutions and (7) maintaining the external value of currency.

The Reserve Bank of India (RBI) was established in April, 1935 and was nationalised in January, 1949, and started functioning as the central bank of India. Some of the general central banking functions performed by the RBI are as follows :

- (1) Issue of currency notes ;
- (2) Working as a banker to the Government of India ;
- (3) Functioning as a banker to all commercial banks ;
- (4) Providing financial assistance to the commercial banks ;
- (5) Maintain the external value of Indian currency ;
- (6) Control over the foreign exchange reserve ; and
- (7) Controlling the credit flow in the economy through different credit control measures.

However, the RBI also performs some non-monetary and non-traditional central banking functions. These are as follows :

- (1) It performs some supervisory functions with regard to the control and supervision over the commercial and co-operative banks ;
- (2) It also performs many developmental and promotional functions. For example, the RBI participated actively in the establishment of various development finance institutions like IFCI (Industrial Finance Corporation of India), IDBI (Industrial Development Bank of India), National Bank for Agriculture and Rural Development (NABARD) etc.



The RBI also publishes important statistical information relating to currency and finance etc.

The RBI plays a great role in the Indian money market as a controller of credit. It controls the process of credit creation by the commercial banks (created through the lending operations of the commercial banks) with the help of some quantitative and qualitative credit control instruments.

The quantitative credit control instruments are Bank Rates (BR), Open Market Operations (OMO), Cash Reserve Requirements (CRR), and Statutory Liquidity Ratio (SLR). With these policy instruments, the RBI controls the total quantity or volume of credit flow in the Indian money market. During inflation, the RBI follows 'tight money policy', while it follows 'cheap money policy' during deflation. Sometimes, the RBI controls the credit flow on the basis of the economic condition of the people or the purpose for which the credit facility is extended by the commercial banks. This is called selective or qualitative credit control policy. Sometimes, the RBI also follows the policy of moral suasion, i.e., making moral appeals to the commercial banks to restrain from certain lines of credit operation.

In open economy monetary policy involves exchange rate management in which Central Bank engages in buying and selling of foreign currency in order to stabilise the country's foreign exchange within a certain limit. In the event of steep exchange rate appreciation due to surplus in balance of payment, Central Bank gets into buying of foreign currency from spot market, while it sells when there arises a condition of drastic depreciation of domestic currency due to deficit in BOP account.

However, exchange intervention has monetary implication. It is in the sense, an attempt to stabilise the exchange rate alters the foreign exchange reserve with Central Bank and in turn impacts Central Bank's balance sheet condition and thereof the monetary base of the economy.

Now given the money supply in an economy derives from its monetary base, any change in latter will find reflection in former. To be specific, when Central Bank (or RBI in case of India) buys foreign currency to prevent steep appreciation it adds to the monetary base and thereby, the money supply. Now if an increase in money supply is a concern to Central Bank due to its inflationary implication the Central Bank to counterbalance such monetary expansion by selling bonds so to pump out excess liquidity present in the system. Similarly, in case Central Bank is made to sell foreign exchange to prevent depreciation, then on the flip side Central Bank will buy bonds. This countervailing purchase or sale of bonds as against a sale or purchase of foreign currency is referred to 'sterilization'.

One important aspect of open economy monetary management is about monetary authority losing its independence in conduct of monetary policy (governed to interest rate regulating exercise) when - (a) exchange rate is administered and (b) capital is fully mobile across the borders. This phenomenon is referred to as 'Impossible Trinity', which signifies the impossibility in having a combination of fixed exchange rate, perfect capital mobility and monetary independence. The reason behind this being that the domestic interest rate of small open economy remains tied to exogenously given foreign interest rate, since any difference between them is immediately bridged by free movement of capital, given that the foreign exchange rate of the home country is fixed.

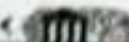
Objective Question Bank

Q. 1. What is a Central Bank ?

Ans. : The bank which is given the responsibility of supervising the activities of all other banks in the economy, as well as the entire monetary system of the country, is called the Central Bank of the country. The Reserve Bank of India is the Central Bank in India. In England, the Bank of England is the Central Bank.

Q. 2. State three functions of a Central Bank.

or, Explain the functions of the Central Bank as a banker to the Government, or, How does the Central Bank act as a fiscal agent to the Government ?



Ans. : The Central Bank of a country performs both regulatory and developmental functions. The following are the three important functions of a central bank:

- Issuing paper notes :** The Central Bank has the sole authority to print currency notes in a country.
- Acting as a banker or fiscal agent to the Government :** The Central Bank also acts as the banker to the Government. The Government maintains an account with the Central Bank. All types of income of the Government are deposited into this account and all the expenses of the Government are also incurred out of this account.
- Acting as a banker to commercial banks :** Commercial banks also keep a certain percentage of their total deposits with the Central Bank, and they can also borrow from the Central Bank. In fact, the Central Bank is the ultimate saviour of commercial banks in times of their exigencies. Thus, the Central Bank is also regarded as the lender of the last resort.

Q. 3. What is meant by bank rate ?

Ans. : The bank rate is that discount rate at which the Central Bank rediscounts different bills of exchange submitted by commercial banks, while taking loans from the Central Bank. Simply speaking, the bank rate is the rate of interest at which the Central Bank lends money to commercial banks. It is regarded as an instrument of the credit control policy of the Central Bank.

Q. 4. What do you mean by quantitative credit control ?

Ans. : This signifies the credit control policy of the Central Bank of any country, which wants to control the total volume or total quantity of credit-flow within the economy. Some of the important instruments of this credit control policy are : bank rate, open market operations, cash reserve ratio, etc. Through these instruments, the Central Bank wants to control the inflationary or deflationary pressures in an economy.

Q. 5. Explain the term 'qualitative/selective credit control'.

Ans. : This is a particular variety of the credit control policy of the Central Bank of any country. It wants to control the flow of credit on the basis of the quality of credit, i.e., on the basis of the purpose for which the credit facility is extended by commercial banks or on the basis of the credit worthiness of the borrowers in a selective manner. According to this policy guidelines, commercial banks can charge relatively higher rates of interest while giving loans to the richer sections of the people and relatively lower interest rates in the case of the poorer sections of the people.

Q. 6. Mention two quantitative and two qualitative measures of credit control.

Ans. : Both quantitative and qualitative measures of credit control are undertaken by the Central Bank of any country. Two quantitative measures of credit control are bank rate and open market operations. On the other hand, two qualitative measures of credit control are differential rates of interest and margin money requirement (e.g., relatively lower rates of interest may be charged by the commercial bank while extending credit facilities to poor persons or priority sectors).

Q. 7. Discuss in brief any two quantitative credit control instruments of the Reserve Bank of India.

Ans. : The credit control instruments of the Reserve Bank of India (RBI) which control the total quantity of credit-flow within the economy, are called quantitative credit control instruments. Two such instruments are :



- Bank Rate :** The bank rate is that discount rate at which the RBI rediscounts the bills of exchange offered by the commercial banks while taking long-term credit from the RBI. Bank rate is decreased at the time of economic recession, and it is increased at the time of inflation.
- Open market operations :** This indicates the purchase and sale of Government securities or treasury bills by the RBI. At the time of inflation, the RBI sells Government securities in the open market to pump out some amount of money from circulation. Most of these securities are purchased by commercial banks and other financial institutions. Since 1962, open market sales of such securities were pursued by the RBI to raise resources for meeting development expenditure and defence expenditure of the Government.

Q. 8. What is bank rate ? How does it influence the total money supply ?

Ans. : The bank rate is that discount rate at which the Central Bank of any country rediscounts any bill of exchange submitted by any commercial bank to take loans from the Central Bank. In the case of India, it generally indicates the interest rate at which the commercial banks borrow credit money from the Reserve Bank of India (RBI). It influences the total supply of money in an economy. When the Central Bank increases the bank rate, the cost of borrowing credit money becomes higher for the commercial banks. So, commercial banks are then permitted to increase their lending rates. This discourages the investors to take loans from commercial banks, resulting in a fall in investment (and hence, the total supply of money) in the economy. In a similar fashion, when the bank rate is decreased then it leads to an increase in total money supply in an economy.

Q. 9. Explain briefly the qualitative/selective credit control policy of the Reserve Bank of India, or, Explain the 'fixation of margin required on secured loan' function of the Central Bank.

Ans. : When credit control measures are imposed by the Reserve Bank of India (RBI) to check the flow of credit on the basis of its quality, i.e., on the basis of the repayment capability of the person who has taken the loan or on the basis of the purpose for which the loan is taken from commercial banks, they are called qualitative or selective credit control measures.

The RBI generally uses three types of selective credit control instruments :

- Margin money :** This implies the minimum margin (say, 30% of the loan amount) to be kept by the borrowers with commercial banks while borrowing money against specific securities from commercial banks. In case of secured or less risky loans, the margin money requirement is kept at a low level.
- Credit authorisation :** This shows the ceiling on the amount of credit for certain purposes (which needs prior sanction of the RBI).
- Differential Rates of Interest (DRI) :** This scheme relates to the discriminatory rate of interest charged on certain lines of advances provided by commercial banks.

Q. 10. Mention any two features of the recent credit control policy of the Reserve Bank of India.

Ans. : In line with the goal of reforming the financial market in India (keeping in view the broad objective of economic globalisation), the credit control policies of the RBI have been changed in recent times. Two features of this policy are :

- The Cash Reserve Ratio (CRR) has been reduced from 4 per cent in December, 2019 to 3.0 per cent in April, 2020. This has been done to increase the availability of loanable funds with the commercial banks, so that they can supply adequate credit to different industries. This is supposed to quicken the process of industrial recovery.
- The bank rate has also been reduced in several phases from 6.75 per cent in December, 2018 to 4.25 per cent in December, 2020.



Q. 11. What is Statutory Liquidity Ratio? How this instrument can be used by the Reserve Bank of India to check inflation?

Ans.: Apart from the cash reserve requirements, all commercial banks in India under the Banking Regulation Act (1949) are to maintain liquid assets in the form of cash in hand, cash with other banks, gold and unencumbered approved securities equal to not less than 20 per cent of their total time and demand deposits with the RBI. This is known as 'Statutory Liquidity Ratio (SLR)'.

$$\therefore \text{SLR} = \frac{\text{Cash in hand} + \text{Cash with other banks} + \text{gold} + \text{approved securities}}{\text{Total Time and demand deposits}}$$

The RBI was empowered to raise this ratio up to 40 per cent.

It was observed that the RBI raised this SLR continuously during the plan periods, to check inflationary pressures. An increase in SLR would mean a fall in the loanable funds with the commercial banks. So, that will check the flow of credit money, and hence, the inflationary pressure.

Q. 12. What do you mean by Cash Reserve Requirements? How this credit control instrument can be used by the RBI to check inflation and deflation?

or, What is meant by CRR? Briefly examine its role in credit control.

Ans.: According to the RBI Act, 1934, every commercial bank had to keep a certain minimum cash reserve with the Reserve Bank of India (RBI). This is known as Cash Reserve Requirements (CRR). By an amendment to that Act in 1962, the RBI was empowered to vary the cash reserve requirements between 3–15 per cent of total deposits of commercial banks.

The RBI increases this cash reserve requirements during inflation. With a rise in the CRR, the amount of loanable funds with the commercial banks declines. Thus, the process of credit creation by the commercial banks is checked. It reduces the flow of money and the aggregate demand in an economy. Hence, inflationary pressure is checked. Similarly, the RBI reduces this CRR at the time of deflation.

Q. 13. Mention two credit control measures which the Reserve Bank of India (RBI) uses to control money supply in India.

or, Explain any two quantitative credit control measures adopted by the RBI.

Ans.: With a view to control the money supply in India, the RBI can adopt the following two types of credit control measures:

(a) **Variations in the bank rate:** The bank rate is the interest rate at which commercial banks take loans from the RBI. So, the bank rate can be considered as the cost of borrowing credit-money for commercial banks. Thus, with an increase in the bank rate, the commercial banks are also allowed to increase their lending rates. However, with an increase in these lending rates, the investors may borrow less from commercial banks. As a result, monetary transactions are reduced. The RBI increases the bank rate to check inflation, and it decreases the bank rate to check deflation.

(b) **Cash Reserve Ratio (CRR):** According to the RBI Act, each commercial bank has to keep a certain percentage of its total deposits with the RBI. The RBI is empowered to vary this CRR between 3 and 15 per cent. When the RBI wants to reduce the supply of money during inflation, it raises the CRR. In that case, the commercial banks are to keep a higher proportion of their total deposits with the RBI, and, therefore, the loanable funds with the commercial banks get reduced. During deflation, however, the RBI reduces the CRR.



Q. 14. Explain any two credit control measures adopted by the Reserve Bank of India (RBI) to check inflation.

Ans.: At the time of inflation, (i.e., increasing trend in the general price level), the RBI can take the following two credit control measures:

- The RBI can raise the bank rate, i.e., the interest rate at which the commercial banks borrow credit money from the RBI; and
- The RBI can raise the Cash Reserve Requirements (CRR) (i.e., the proportion of total deposit, which a commercial bank has to maintain with the RBI).

With these measures, the amount of loan sanctioned by the commercial banks would fall. This reduces the purchasing power of the people. Hence, an excess demand condition, which often creates inflationary pressures, is checked to some extent.

Q. 15. Mention any two credit control measures which the Reserve Bank of India (RBI) has adopted to check deflationary conditions in the economy.

Ans.: At the time of economic deflation or depression, an excess supply condition is created in the economy, leading to a continuous fall in the general price level, investment, income and employment (during 1997-2003). To check this tendency, the RBI has adopted the following two credit control measures:

- The RBI has reduced the bank rate, (which is followed by a fall in the lending rates, i.e., the interest rates charged by the commercial banks while lending money to its customers); and
- The RBI has reduced the Cash Reserve Requirements (CRR), so that the loanable funds with the commercial banks are increased. As a result, commercial banks become capable of giving more loans to the investors. This leads to an increase in production, income and employment opportunities in the economy. Additional income generates additional demand for various products.

Q. 16. How much is the Statutory Liquidity Ratio (SLR) as fixed by the Reserve Bank of India?

Ans.: According to the Banking Regulation Act, all commercial banks in India are to maintain liquid assets in the form of cash in hand, cash with other banks, gold and unencumbered approved securities equal to not less than 20 per cent of their total deposits with the Reserve Bank of India. This is known as 'Statutory Liquidity Ratio (SLR)'. The RBI was empowered to raise this SLR up to 40 per cent. The RBI generally increases the SLR to check the inflationary pressure, and reduces this ratio at the time of deflation. Thus, the SLR was gradually increased from 30 per cent in 1970 to 38.5 per cent in 1990 to check inflationary pressure, and it was reduced from 19.50 per cent in 2017 to 18 per cent in 2020 by stages to check the economic recession.

Q. 17. Differentiate between SLR and CRR.

Ans.: Both CRR and SLR are the quantitative credit control instruments used by the RBI.

Cash Reserve Ratio (CRR)	Statutory Liquidity Ratio (SLR)
1. It is the ratio of a minimum cash reserve to total deposits that every commercial bank has to keep with the Reserve Bank of India (RBI).	1. It is the ratio of liquid assets (in the form of cash in hand, cash with other banks, gold and approved securities) to the total time and demand deposits that the commercial bank has to maintain with the RBI.
2. The RBI can vary the CRR between 3-15%.	2. The RBI can vary the SLR between 20-40%.



Q. 18. How does fixation of margin required on secured loan practised by the Reserve Bank of India affect the flow of credit in the Indian economy?

Ans.: As a part of the selective or qualitative credit control policy, the Reserve Bank of India (RBI) fixes the margin required on secured loan provided by any commercial bank. This margin money policy aims at either restricting the flow of credit in some sector (by fixing higher margin money requirement) or encouraging the same in some priority sector (by fixing lower margin requirement, say, on loan given to small and marginal farmers).

Q. 19. Distinguish between qualitative and quantitative credit control policy of the Central Bank.

Ans.: Some of differences between the qualitative and quantitative credit control policy of the Central Bank are as follows:

Quantitative Credit Control	Qualitative Credit Control
1. This credit control measure aims at regulating the total volume of credit in an economy.	1. This measure aims at controlling the flow of credit in some selected or particular sectors of the economy.
2. It regulates the availability of loanable funds with the commercial banks and controls investment in all the sectors of an economy.	2. It regulates the flow of credit from the commercial banks on the basis of the purpose of investment or the credit-worthiness of the borrower.
3. This control measure uses the instruments like bank rate, cash reserve ratio, statutory liquidity ratio, open market operation etc.	3. This measure uses the credit control instruments such as margin money, differential rates of interest, etc.
4. This measure affects equally the backward and advanced sectors of an economy.	4. This measure encourages the flow of credit in some priority sectors and does not affect the backward rural economy of a country.
5. This measure is more suitable for a developed economy.	5. This measure is suitable for a less developed economy.

Q. 20. State two ways by which a deflationary situation can be controlled by qualitative methods of credit control.

Ans.: During economic deflation, the Central Bank can adopt the following two qualitative credit control methods:

(a) **Reduction of margin money requirements:** This method induces the borrowers to take more loan from the commercial banks. (Since they are to keep relatively smaller proportion of the loan amount as margin money with the bank).

(b) **Relaxation in credit authorisation:** The Central Bank can also reduce the ceiling on the amount of credit to be disbursed by the commercial banks for certain purposes.

Q. 21. What is meant by open market operations? How does it influence money supply?

Ans.: The open market operations signify the buying and selling of government securities by the Central Bank of a country to control the supply of money in an economy. It is a quantitative credit control instrument of the Central Bank. When the Central Bank sells government securities then these are generally purchased by the commercial banks. This reduces the loanable fund with the commercial banks. Hence, money supply through credit creation by the commercial banks will fall. Similarly, when the Central Bank purchases government securities from the commercial banks, the money supply rises in the economy.



Q. 22. What is meant by 'repo' rate?

or, What is 'reverse repo' rate?

Ans.: Repo refers to a transaction in which a participant acquires funds immediately by selling securities with an agreement to repurchase the same after a specified time at a specified price. So, it is a temporary sale of debt involving transfer of ownership of the securities. It also refers to a ready forward transaction, as it acquires funds by selling the security on a spot basis and repurchasing the same on a forward basis. Reverse repo is exactly the opposite — a party buys a security from another party with an agreement to sell it back on a later date at specified price. This transaction is repo for one party and reverse repo for another party. Reverse repo earns some returns on idle cash held by the party. The RBI uses repo and reverse repo as the instrument for controlling credit supply during short-run in Indian economy. The repo rate is increased to control the inflationary situation, while it is lowered during economic recession. In case of repo operation, the commercial banks can get short-term fund from the RBI by selling approved securities to the RBI with a repurchase agreement to buy those securities, say, after 14 days. The interest rate charged (or the discount rate on those securities) is called as repo rate. Here, the objective is to meet the excess demand for liquidity. In case of reverse repo operation, the RBI sells short-term securities to the commercial banks with a repurchase agreement. The interest rate or the discount rate (on those securities) offered by the RBI is called as the reverse repo rate. Here, the object is to pump out excess liquidity.

Q. 23. Distinguish between 'repo' rate and 'reverse repo' rate.

or, What is 'reverse repo' rate?

Ans.: The RBI uses repo and reverse repo as the instrument for controlling credit supply during short-run in Indian economy. The repo rate is increased to control the inflationary situation, while it is lowered during economic recession. The difference between repo and reverse repo are shown below:

Basis	Repo	Reverse Repo
Meaning	It means a transaction whereby the participant can acquire funds by selling securities and simultaneously agrees to repurchase the same after a specified time at a specified price.	It signifies a situation where one party buys the security from another party with a commitment to sell it back to the latter after a specified time at a specified price.
Purpose	It enables collateralised short-term borrowing and lending through sell/purchase operations in debt instruments.	This transaction is undertaken particularly to earn additional income on idle cash balance.
Implication for liquidity	Repo implies injection of liquidity in the economy.	Reverse repo implies absorption of excess liquidity.
Interest	It implies the interest rate charged by the lender upon the borrower.	It implies the interest rate offered by the borrower to the lender.



Assignment

Short-Answer Type Questions

1. What is Central Bank? (See Q. Bank, Q. No. 9)
2. What is meant by Bank Rate? (See Subsection 4.2.1.)
3. What is meant by quantitative credit control? (See Subsection 4.2.1. & Q. Bank, Q. No. 4)



4. What is qualitative credit control/selective credit control?
on, What are the qualitative instruments of monetary policy?
(See Subsection 4.2.2.)
(CIL, BA/BSc (H), Sem-VI, 2022)
5. Indicate how fixation loan margin by Central Bank alters the credit flow in the economy?
(See Subsection 4.2.2.)
6. Indicate the impact loan margin fixation by RBI on credit flow in the Indian Economy.
(See Q. Bank, Q. No. 18)
7. State two ways in which a deflation can be controlled by qualitative credit control measures.
(See Q. Bank, Q. No. 20)
8. Define the term 'moral suasion'.
(See Subsection 4.2.2.)
9. What do you mean by open market operation?
(See Q. Bank, Q. No. 21)
10. Mention any two quantitative and any two qualitative measures of credit control. (See Q. Bank, Q. No. 6)
11. Indicate any two differences between quantitative and qualitative measures of credit control.
(See Q. Bank, Q. No. 9)
12. What is Cash Reserve Ratio or CRR?
(See Q. Bank, Q. No. 12)
13. How is CRR used to contain inflation?
(See Q. Bank, Q. No. 12)
14. Mention any two credit control measures used by RBI to contain recession.
(See Q. Bank, Q. No. 15)
15. Indicate the any two instruments used by RBI to curb inflation.
(See Q. Bank, Q. No. 14)
16. What is Statutory Liquidity Ratio or SLR?
(See Q. Bank, Q. No. 16)
17. Mention any two difference between CRR and SLR.
(See Q. Bank, Q. No. 17)
18. What do you mean by LAF?
(See Subsection 4.2.1.)
19. Mention the difference between repo rate and reverse repo rate.
(See Q. Bank, Q. No. 23)
20. What is TLTRO?
(See Subsection 4.2.1.)
21. What do you mean by the term 'sterilization'?
(See Subsection 4.3.3. & Summary)
22. How does RBI respond when rupee tends to appreciate/depreciate too much?
(See Subsection 4.3.3. & Summary)
23. How does purchase/sale of foreign currency by Central Bank impact the domestic money? How is it averted?
(See Subsection 4.3.3. & Summary)
24. How does a monetary expansion (or expansionary monetary policy move) impact aggregate output/income in an open economy when exchange rate is fixed/flexible with capital being perfectly mobile?
(See Subsection 4.3.1.)
25. What is meant by 'demonetisation'?
(See Subsection 4.4.)
26. What is the relation between demonetisation and money multiplier?
(See Subsection 4.4.1.)
27. How has the recent demonetisation in India impacted her economy?
(See Subsection 4.4.)

Long-Answer Type Questions

1. Explain the role of central bank in controlling the flow credit in the economy highlights its anti-inflationary implication.
(See Section 4.2., Subsections 4.2.1 & 4.2.2.)
2. Examine the importance quantitative credit control in maintaining price stability. Indicate few limitations of such approach to credit control.
(See Subsection 4.2.1.)
3. Examine the relevance of qualitative credit control mechanism. How is it different from quantitative credit control?
(See Subsection 4.2.1. & Q. Bank, Q. No. 19)
4. Write shorts on — (a) Bank Rate (b) CRR (c) SLR (d) LAF.
(See Subsection 4.2.1.)
5. Examine the role of monetary policy in containing recession in case of a small open economy with perfect capital mobility.
(See Section 4.3. & Subsection 4.3.1.)



6. Is monetary management effective in reversing a contraction of real economic activities in small open economy with fixed exchange rate and perfect capital mobility? Give your argument.
(See Section 4.3. & Subsection 4.3.1.)
7. Examine the projections of Mundell-Fleming model as on the effectiveness of monetary policy in containing recession or economic downturn. What is 'Impossible Trinity'? (See Section 4.3., Subsection 4.3.1. & 4.3.2.)
8. Write short notes on : (a) Impossible Trinity and (b) Sterilization.
(See Subsections 4.3.2. & 4.3.3.)
9. What is demonetisation? Give an account of the recent demonetisation in India.
(See Section 4.4.)
10. Examine the implication of demonetisation so far as the concept of 'money multiplier' is concerned.
(See Subsection 4.4.1.)
11. Explain the relation between demonetisation and money multiplier.
(See Subsection 4.4.1.)
12. Explain the impact of demonetisation on aggregate output or income in case of — (a) closed economy and (b) open economy.
(See Subsection 4.4.2.)
13. 'An unanticipated demonetisation can breed recession' — Explain.
(See Subsection 4.4.2.)
14. The monetary policy of a Central Bank may want to achieve (i) A targeted price level and (ii) A targeted real national income.
Do you think that both these targets can be achieved simultaneously? Explain.
(See Subsection 4.1.1.)
15. Explain the need for intermediate targets of monetary policy.
(See Subsection 4.1.1.)
16. Explain the justification for setting interest rate as an intermediate target of monetary policy.
(See Subsection 4.1.1.)
17. Explain the justification for setting money supply as an intermediate target of monetary policy.
(See Subsection 4.1.1.)





C.U. Question Paper

2020

ECONOMICS — GENERAL

Paper : DSE-A-1

(Money and Banking)

Sem - V

Full Marks : 60

Candidates are required to give their answers in their own words
as far as practicable.

The figures in the margin indicate full marks.

Group - A

1. Answer any ten questions :

2 × 10

- Define high-powered money.
- What do you mean by broad money ?
- What is a deposit multiplier ?
- Mention two negative effects of demonetisation.
- Define interest rate.
- Define cash reserve ratio.
- Mention the names of two nationalised banks in India.
- What is the full form of SLR ?
- Which of the financial market deals mainly with long-term funds ?
- Mention two functions of the commercial banks.
- In which year was the policy of demonetisation adopted in India ?
- What is repo rate ?
- Mention two types of financial institutions in India.
- Define capital market.
- Which committee is associated with the financial sector reforms in India in the nineties ?

Group - B

2. Answer any three questions :

5 × 3

- What are the different measures of money supply ?
- Distinguish between money market and capital market.
- State the role of financial derivatives in the financial market.
- What is the role of financial market in India ?
- What do you mean by the term 'structure theory' of the interest rate ?

Group - C

3. Answer any three questions :

- How do the commercial banks create credit ? What are the limitations of this process of credit creation ? 7+3
- Discuss the credit control measures adopted by RBI in India. 10
- Define differential interest rate. What are the reasons for the differential interest rate ? 2+6

- Discuss the recent changes in the monetary policy adopted by RBI. 10
- Define money market. What are the functions of the money market ? 2+8

2021

ECONOMICS — GENERAL

Paper : DSE-A-1

(Money and Banking)

Sem - V

Full Marks : 60

Candidates are required to give their answers in their own words
as far as practicable.

The figures in the margin indicate full marks.

1. Answer any ten questions :

2 × 10

- What is derived deposit ?
- What is 'M₁' component of money supply ?
- What is NABARD ?
- What is 'broad money' ?
- If the CRR is 5%, what will be the value of money multiplier ?
- What do you mean by deficit spending unit ?
- What is money Market ?
- What do you understand by non-bank financial institution ?
- Mention two weaknesses of India's capital market.
- What is the difference between gross interest and net interest ?
- Mention any two causes of interest rate differentials.
- What is interest ?
- What is SLR ?
- What do you understand by CRR ?
- What is bank rate ?

2. Answer any three questions :

5 × 3

- Write a short note on high powered money.
- Describe the major reforms that have been taken place in Indian capital market in the recent years.
- What do you mean by the term structure theory of interest rate ?
- State the major changes that have been taken place in the monetary policy of RBI in the post-reforms period.
- Write a short note on repo.

3. Answer any three questions :

- What do you understand by balance sheet of a business organisation ? Describe the balance sheet of the commercial bank. 2+8
- Describe the structure of India's financial system. 10



- (c) What do you mean by financial intermediaries? Distinguish between bank and non-bank financial intermediaries. 2+8
- (d) Explain the expectations theory of interest rate structure. Mention the limitations of this theory. 2+8
- (e) Discuss the credit controlling methods of RBI. 10

2022

ECONOMICS – GENERAL

Paper - CSE-A-1

(Money and Banking)

Sem - V

Full Marks - 65

Candidates are required to give their answers in their own words
as far as practicable.

The figures in the margin indicate full marks.

1. Answer any ten questions.

2 x 10

- (a) What is a deposit multiplier?
- (b) Mention two recommendations of Narasimham Committee for reforms of banking system in India.
- (c) Mention two importances of Financial Market.
- (d) If CRR is 10%, what will be the value of money multiplier?
- (e) What are the motives of holding cash in hand?
- (f) What is financial intermediary?
- (g) Mention two functions of commercial bank.
- (h) What is the difference between Gross interest and Net interest?
- (i) Mention two differences of Money Market and Capital Market.
- (j) Mention two limitations of Indian Money Market.
- (k) Name two nationalized banks of India.
- (l) What is financial system?
- (m) Write the full form of SEBI.
- (n) What are the components of the Financial Market?
- (o) What is open market operation?

2. Answer any three questions:

3 x 3

- (a) Mention the function of secondary or share market.
- (b) What are the different measures of money supply?
- (c) Describe the structure of Indian capital market.

(d) Write a short note on Repo.

(e) Mention the major reforms of Indian Banking sector.

Answer any three questions:

- (a) What is a financial institution? Write down the classification of financial institution. 3 + 7
- (b) Define differential interest rate. What are the reasons for the differential interest rate? 2 + 8
- (c) Discuss the credit expansion policy of the Reserve Bank of India. 10
- (d) What is demonetisation? What are its objectives? What are its effects on the Indian Economy? 2 + 3 + 5
- (e) What is the significance of financial system? What are the functions of a financial system? 4 + 6



2021

ECONOMICS — HONOURS

Paper : DSE-A(2)-1

(Money and Financial Market)

Sem - VI

Full Marks : 65

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Group - A**I. Answer any ten questions :**

2 × 10

- State two important characteristics of the assets traded in the money and financial markets. 2
- Distinguish between money market and capital market. 2
- Define Repo rate. 2
- What is leveraging? 2
- What are the roles of financial institutions? 2
- What is debenture? 2
- What is meant by Asymmetric Information? 2
- What is moral hazard? 2
- What happens to money supply if the value of money multiplier rises? 2
- Distinguish between primary and secondary market. 2
- What do you mean by Stock Exchange? Name any two Stock Exchanges of India. 1+1
- Distinguish between Narrow Money and Broad Money. 2
- Define T-bills. 2
- State any two important functions of SEBI. 2
- Give two examples of Development Financial Institutions (DFI) in India. 2

Group - B**Answer any three questions :**

5 × 3

- What are the general features of the financial institutions?
- What are the main types of risk associated with the operation of a Bank?
- Give a brief idea on the structure of balance sheet of RBI.
- Distinguish between equity share and preference share.
- Write a short note on Banking Sector Reforms in India during 1991.

Group - C**Answer any three questions :**

- Give a brief account on adverse selection and moral hazard in the financial market with suitable examples. 4+6



- Write a short note on the measures of money supply in India. 10
- What are the instruments of Credit Control of RBI? 4+6
- State the different theories on term structure of interest rate. 10
- (a) 'Government securities are considered as risk free instruments' — Examine. 10
- (b) Give a brief account on the different types of money market instruments in India. 3+7
- (a) What are the sources of Interest rate differential in Banks? 10
- (b) What do you mean by derivatives? What are the common types of derivatives traded in financial market? 2+(2+6)

2022

ECONOMICS — HONOURS

Paper : DSE-A(2)-1

(Money and Financial Market)

Sem - VI

Full Marks : 65

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Group - A**I. Answer any ten questions :**

2 × 10

- What is yield to maturity? 2
- State any two role of financial system in economic development. 2
- What are the possible shapes of a yield curve? 2
- Distinguish between CRR and SLR. 2
- Can the interest rate be zero? Explain. 2
- State the relationship between interest rate and bond price. 2
- Define Broad Money. 2
- What is zero coupon bond? 2
- What do you mean by risk sharing? 2
- Explain the notion of present value of a bond with the help of an example. 2
- The return on a bond will be necessarily equal to the rate of interest. — Do you agree? Explain. 2
- Define money multiplier. 2
- What are financial derivatives? 2
- What are the qualitative instruments of monetary policy? 2
- What do you mean by Liquidity Adjustment Facility (LAF)? 2

**Group - B**

Answer any three questions :

5 × 3

2. What is the role of financial intermediaries in the financial system ?
3. Explain the concept of adverse selection in financial market with suitable examples.
4. Write a short note on measures of money supply in India.
5. What are the advantages of mutual funds as investment for small savers ?
6. What are the sources that results in interest rate differentials ?

Group - C

Answer any three questions :

7. Discuss the major recommendations of the 1st and 2nd Narasimham Committee. How far these recommendations guided banking sector reforms in India ? 6+4
8. (a) Define high powered money.
(b) Show that money supply is equal to the money multiplier times monetary base. 2+8
9. (a) Distinguish between money market and capital market.
(b) Give a brief outline of the major money market instruments in India. 3+7
10. (a) Explain the role of central bank in controlling the flow of credit in the economy in order to combat inflation.
(b) What are banking and non-bankings financial intermediaries ? 7+3
11. (a) What is the relation between nominal and real interest rate ?
(b) What is term structure of interest rate ? Critically explain the expectation theory on term structure of interest rate. 2+(1+7)

